



City of Concord
10-Year Comprehensive Solid Waste Management
Plan

Three Year Update
Covering July 1, 2009 to June 30, 2019

August 2009

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Executive Summary

This plan is the fourth three-year update to the original City of Concord Solid Waste Management Plan, prepared in accordance with N.C. General Statute 130A-309.09A (b) for the purpose of identifying local solid waste needs and establishing a strategic plan to meet future needs and to adequately protect the public health and the environment.

This plan applies only to the City of Concord. The City's population has increased at an annual average growth rate of 4.9 % since 1996. New residents and businesses acquired as the City continues to grow through annexation and the proliferation of new developments are reflected in all aspects of the Plan.

The City of Concord recently renewed its contract Solid waste collection contract with Allied Waste/Republic Services for three years, through June 30, 2011 with the possibility of renewals. The residential recycling collection contract was renewed for 1 year to allow both parties to continue negotiating the details of the franchise agreement related to Allied/Republic providing recycling services to the City of Concord. The new agreement will eliminate the vague language included in the original franchise agreement that was repeated in the revised franchise agreement in 2003 that extended solid waste disposal for an additional 30 years. Both of these agreements are with Allied Waste Services who was recently acquired in a merger with Republic Services.

The City is currently conducting a comprehensive evaluation of the contract collection and city crew staffed services to identify efficiency, effectiveness, and to benchmark operations against comparable cities. The goal of this program evaluation is to identify cost reduction alternatives for consideration by City Council that will continue to meet local solid waste and recycling needs and provide financial resources and program alternatives to meet the challenges of the future.

The City of Concord's current and long range vision is for a comprehensive waste management program that helps promote the **City of Concord's Core Values: Accountability, Continuous Improvement, Environment, Ethics, Respect, Safety, Teamwork and Trust.**

This vision is translated into five long-range planning goals listed below.

Planning Area Goals

Goal 1: To provide every City resident with waste collection, disposal capacity, and waste reduction opportunities.

Goal 2: To increase the efficiency and cost effectiveness of the solid waste program while simultaneously increasing the reliability of services delivered in the face of rapid municipal growth.

Goal 3: To demonstrate a "good faith effort toward meeting the established 40 percent waste reduction goal established by the State of North Carolina.

Goal 4: To decrease improper waste disposal through public education and consistent enforcement as necessary.

Goal 5: To protect public health and welfare and the environment.

A few observations from the data assembled for this report are enlightening.

1. The residential solid waste component of our waste stream only makes up 33-percent of our total waste stream. Construction, Demolition and Land clearing (C&D – associated with construction and development of new homes and businesses) makes up 40-percent of the waste stream. Commercial, Industrial, and Institutional (CII – associated with the operation of commercial, manufacturing and non-profit segments of our community) contribute an additional 27-percent of the waste stream. With the slowing of the local economy and seeing the housing and construction industries experience a corresponding slowdown and many businesses experience a dramatic drop-off in their earnings, the Waste Disposal Rate was observed to drop from 1.55 tons per capita in FY05 to 1.27 tons per capita in FY08.

The economic downturn was not fully apparent throughout FY08, but this 18-percent drop in the waste generation rate indicates a direct relationship our community waste generation rate has to the construction industry and to the CII segments. It may be beneficial to explore these relationships in more detail and seek to identify yet untapped recycling and waste reduction opportunities. The City may then look for opportunities to partner with the business and construction industries for ways to further reduce our waste generation rate through new recycling and waste reduction programs.

Boosting our recycling programs available to the business community presents an opportunity to identify ways to reduce waste and increase recycling. The materials we seek to recover should be carefully studied to target those that receive high payback in order to recover as much of our operating cost as possible.

Immediately, the City should explore the possibility of monthly reports of materials and tonnages generated and disposed by contractors and developers from within Concord. Some of these materials are recyclable at the C&D landfill, and these numbers could be included in our annual report if we can document they originated within Concord and were indeed recycled. These numbers, if they are available, would improve the accuracy and completeness of our annual reports as well as our 3-year updates.

2. The City of Concord is conducting a comprehensive evaluation of all aspects of the Solid Waste Management Program, focusing on customer satisfaction, efficient and cost effective delivery of service, and preparedness to meet the challenges of the. The City's services will be benchmarked against cities of similar size and nature, and identify industry proven service delivery options for consideration by City Council that may offer improved service along with cost savings that may allow expansion of waste reduction and recycling programs.

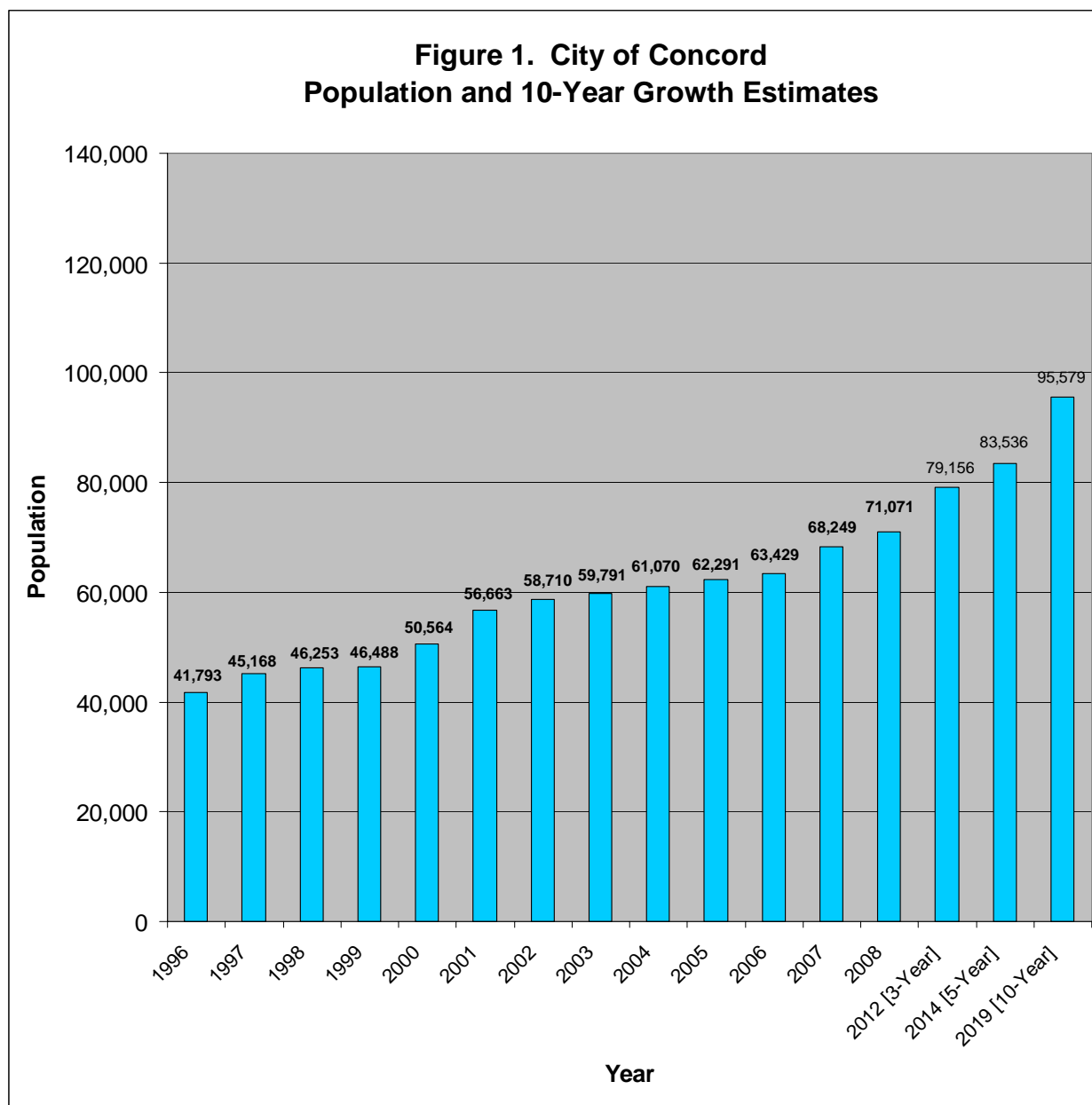
3. Understanding the benefits of broadening recycling opportunities within the community, Concord and Cabarrus County have partnered to determine the feasibility of constructing a Material Recovery Facility or Transfer Station to process recyclables for the communities in Cabarrus County. Rising transportation costs, the convenience of a local facility and the ability to leverage larger volumes of materials to secure the best price in this volatile market place, may make this facility a welcomed addition to our community.

1.0 Geographic and Solid Waste Stream Evaluation

1.1 Geographic Area and Population

This solid waste management plan covers the Concord city limits. The City of Concord is contained solely in Cabarrus County, North Carolina just outside the city limits of Charlotte. The City of Concord GIS Department keeps an accurate record of the current city limit boundaries and areas that have been annexed.

The most recent population totals received from the North Carolina Office of State management & Budget (NCOSMB) are for the period ending June 30, 2008.



Population estimates (*) for the City over the next ten years are presented in Figure 1, using the calculated 4.94-percent running average annual growth rate from 1996 (population 41,793) through 2008 (population 71,071). Concord has grown from a population of 31,747 and area of 31.61 sq mi in July 1992 to a population of 71,071 and an area of 63.09 sq mi in July 2008. This is a 124 percent total growth in population and a 99.6 percent area growth in the City of Concord.

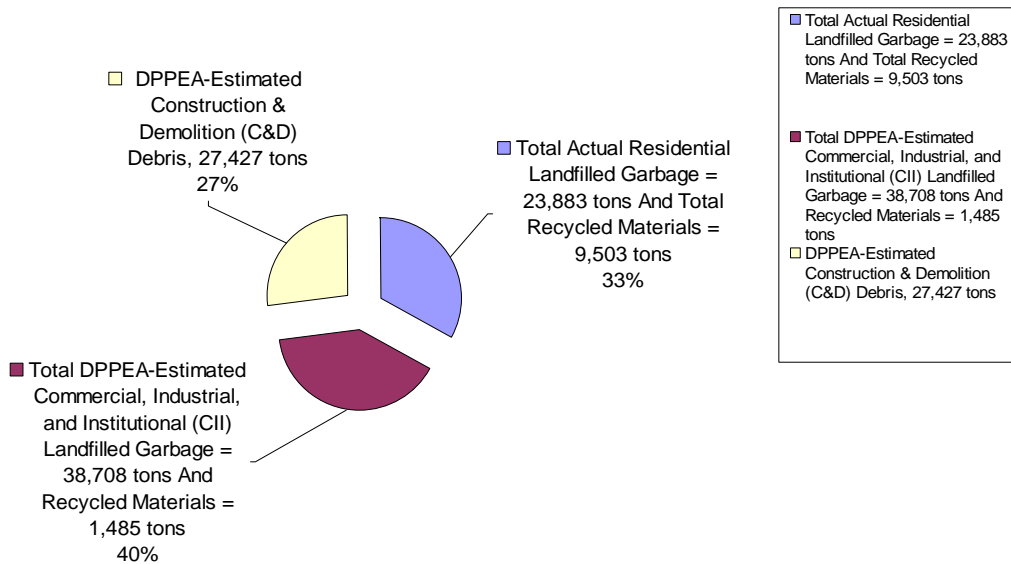
1.2 Waste Stream Evaluation

The City of Concord recognizes the need to develop new waste programs, policies, and incentives for waste reduction and recycling in the face of rapid municipal growth and development. Achieving the State waste reduction goals remains a challenge that may be difficult to reach. In a press release from NCDENR dated May 15, 2009 (Appendix G), the overall annual recovery rate for the State of North Carolina decreased by 6.8 percent and waste disposed fell by 4.7 percent. This drop was attributed mostly to the decline in yard waste recovery due to the drought. When yard waste and tire recovery data were removed, the overall recycling tonnage increased by approximately 28 percent and the per capita recovery increased by 10 percent over the last decade. A number of local measures have been implemented and demonstrate the City's commitment to be proactive in the face of these challenges.

In this plan, residential waste refers to waste generated by households (individual and multi-family dwellings of less than 6 units). The term non-residential refers to waste generated from commercial, industrial, and institutional activities. Construction and demolition waste is generated from construction activities and is separated from non-residential waste in this plan because it will be disposed in a different facility than most non-residential waste.

Figure 2 presents the City of Concord's total waste stream by sector. The total residential garbage reflects the reported waste delivered to the Allied Waste-CMS Landfill in FY 07-08. Commercial, Industrial and Institutional (CII) and Construction and Demolition (C&D) are estimates based on population using values provided by the North Carolina Department of Pollution Prevention and Environmental Assistance (DPPEA). The most recent waste disposal rate at a population of 71,071 is **1.27 tons per capita**. This is a decrease from the previous disposal rate of 1.55 tons per capita in FY 04-05.

Figure 2.
Waste Generation by Sector, FY 2007-08
Total Estimated = 101,006 tons



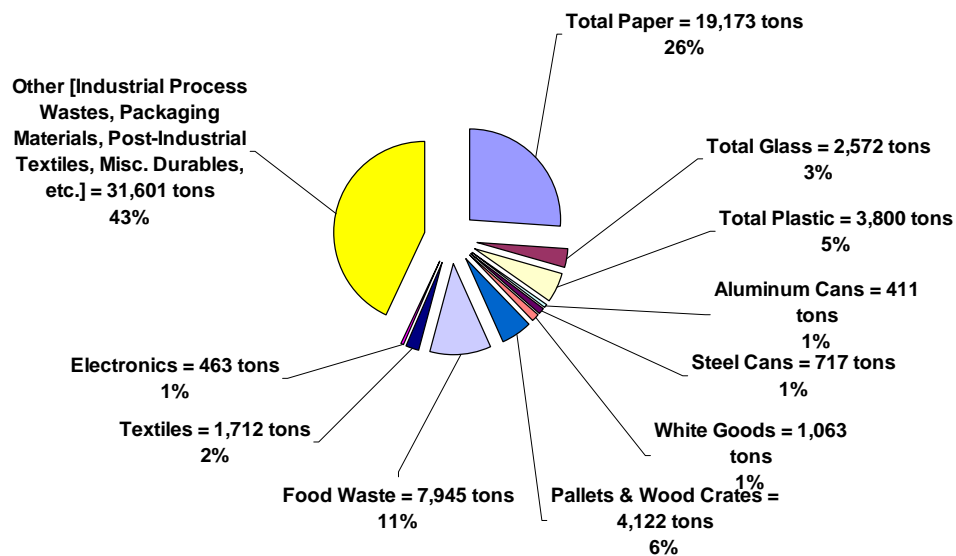
Curbside residential garbage and commingled recycling collection are provided weekly. Each residence is limited to one 95-gallon rollout container. A second and third rollout container may be requested for a \$9.00 per month fee for each container to create a financial incentive to encourage waste reduction. Residents may request multiple 18-gallon bins for commingled recycling. Participation in the residential recycling program is voluntary.

Until March 1, 2001, the City subsidized refuse collection for commercial customers by providing and paying for bulk (dumpster) collection. This practice provided no economic incentive to reduce, reuse, or recycle waste in the commercial sector.

Now, all commercial, industrial, and institutional operations, including multi-family housing must pay for and contract their own waste disposal. In an effort to provide further incentives to recycle, the City provides white paper and corrugated recycling programs at no cost to these CII customers. These incentives are needed to encourage the recycling and reuse necessary for the City to achieve local waste reduction goals and to extend the life of existing landfills. The major non-residential waste generators in Concord are: Carolinas Medical Center-Northeast (aka Northeast Medical Center), Sysco Foods, Lowes Motor Speedway, and Concord Mills Mall.

DPPEA provides estimated tonnage for selected components within the waste stream sectors for residential, commercial, industrial, and institutional within North Carolina counties and municipalities. Using the DPPEA estimates, the composition of the City of Concord waste stream is presented in Figure 3.

Figure 3. City of Concord
FY 07-08 Estimated Residential & CII Waste Stream Generation
Components
Using FY 07-08 DPPEA Estimates
Total = 73579 tons



2.0 Local Waste Reduction Goals

The City of Concord previously established local *per capita* waste reduction goals of 15% by June 30, 2001 and 40% by June 30, 2006, using 1991 as the base year. The actual waste disposal rates and projections for the ten-year planning period are presented in Tables 2.1, 2.2, & 2.3, and in Figures 4A and 4B. The projected waste estimates utilize the current generation rate of 1.42 tons per capita and the current disposal rate of 1.27 tons per capita.

The reported waste disposal rate was 1.06 tons per capita during the base year, FY 91-92. By FY 01-02, the disposal rate increased to 1.48 tons per capita, representing a 39.6 percent increase, rather than the 15 percent decrease targeted. However, review of the FY 91-92 figures indicate the incorrect population estimate was used, and no C&D tonnages were included in developing the 1.06 tons *per capita*. The correct population and estimated C&D tonnages are considered here for comparison purposes only. The actual population was 30,803 rather than the 32,544 reported. Using 50 percent of the current C&D generation rate (50 percent of 0.6874 tons *per capita*) would increase the reported disposed by 10,587 tons to an adjusted figure of 45,206 tons disposed. This adjustment in tons and population indicated the FY 91-92 disposal rate should be 1.47, rather than 1.06 tons *per capita* originally reported. A local commitment to reduce waste disposal and increase recycling continues.

Multiple factors have caused this disposal rate to increase in spite of local waste reduction and recycling efforts. Between 1991 and 2001, the local population grew from 30,803 to 58,710, a 91 percent increase. Over this same period, the estimated C&D waste contribution has increased from 10,587 tons to 40,355 tons. This 381 percent increase is a major contribution to the increased generation rate. It is readily apparent that the influence of local growth has overwhelmed our waste reduction plans presented in earlier reports, and our local goals need to be revised.

The total waste generated (estimate) for FY 07-08 is 101,006 tons. The current amount recovered in FY 07-08 was 10,988 tons. Assuming that the current average population growth rate of 4.9 % and the current waste generation rate of 1.42 tons per capita remain steady, the revised goals consist of decreasing the waste disposal rate by increasing the waste recovery (i.e. recycling) rate by 1% each year for the next ten years. If this targeted increase in recovery is met, the waste disposal rate should decline from the current 1.27 tons per capita to achieve 1.12 tons per capita by the year 2019.

Table 2.1**Three-, Five-, and Ten-Year Waste Generation Rate & Waste Disposal Rate**

Fiscal Year	Population	Amount Generated [tons]	Generation Rate [tons per capita]	Amount Disposed [tons]	Disposal Rate [tons per capita]	(Target) Recovery [%]	(Target) Weight Recovered [tons]
Reported FY 91-92 (Baseline Year)*	32,544	34,619	1.06				
Adjusted FY 91-92 (Baseline Year)*	30,803	45,206	1.47				
FY 01-02	58,710	60,250	1.03	50,905	0.87	15.51%	9,345
FY 02-03	59,791	78,857	1.32	65,345	1.09	17.13%	13,512
FY 03-04	61,070	66,010	1.08	51,469	0.84	22.03%	14,541
FY 04-05	62,291	107,092	1.72	96,439	1.55	9.95%	10,653
FY 05-06	63,429	105,063	1.66	94,326	1.49	10.22%	10,737
FY 06-07	68,249	103,034	1.51	91,336	1.34	11.35%	11,698
FY 07-08	71,071	101,006	1.42	90,018	1.27	10.88%	10,988
FY 08-09	73,011	103,763	1.42	89,236	1.22	14.00%	14,527
FY 11-12	79,156	112,496	1.42	93,372	1.18	17.00%	19,124
FY 13-14	83,536	118,721	1.42	96,164	1.15	19.00%	22,557
FY 18-19	95,579	135,837	1.42	103,236	1.08	24.00%	32,601

*Note - The reported FY 91-92 waste disposal tonnages did not include any C&D waste. The adjusted FY 91-92 figures have been revised in this table to reflect review of data originally submitted to more accurately reflect the impact of local waste reduction initiatives. The adjusted value has increased from 1.06 to 1.47 *tons per capita*. The baseline FY 91-92 figure is used to calculate reduction percentages in Table 5a. The FY 01-02 waste generation rate is used to calculate the current waste reduction goals, beginning with 5 percent in FY 05-06. The current 1.27 *tons per capita* generation rate has been used to estimate future waste disposal tonnages.

Table 2.2**Target Three-, Five-, and Ten-Year Waste Reduction Goals**

(Based on FY 91-92, Using Revised Goals & Latest Waste Generation Rate)

Calculations	FY 2011-12	FY 2013-14	FY 2018-19
1. Baseline FY 91-92 year per capita disposal rate	1.06	1.06	1.06
2 Percent [% change tons/capita] Waste Reduction Goal (based on FY 04-05 waste disposal rates)	-15.09%	-12.26%	-5.66%
3. Targeted per capita disposal rate [tons/capita]	1.22	1.19	1.12
4. Population Projections	79,156	83,536	95,579
5. Tonnages at baseline disposal rate [tons] (Line 1 * Line 4)	83,905	88,548	101,314
6. Projected tonnages at goal disposal rate [tons] (Line 3 * Line 4)	96,570	99,408	107,048
7. Targeted annual tonnage reductions [tons] (Line 5 - Line 6)	-12,665	-10,860	-5,735

Note: DENR requires all calculations be based on the reported FY 91-92 figures. Therefore, the waste reduction goals calculated using the FY 91-92 and the targeted annual reduction tonnages result in negative numbers. When considering the negative percentages reported in line 2, remember we have experienced a 39.6 percent increase in generation rate due largely from adding C&D to the latest numbers, but omitting them from the FY 91-92 calculations.

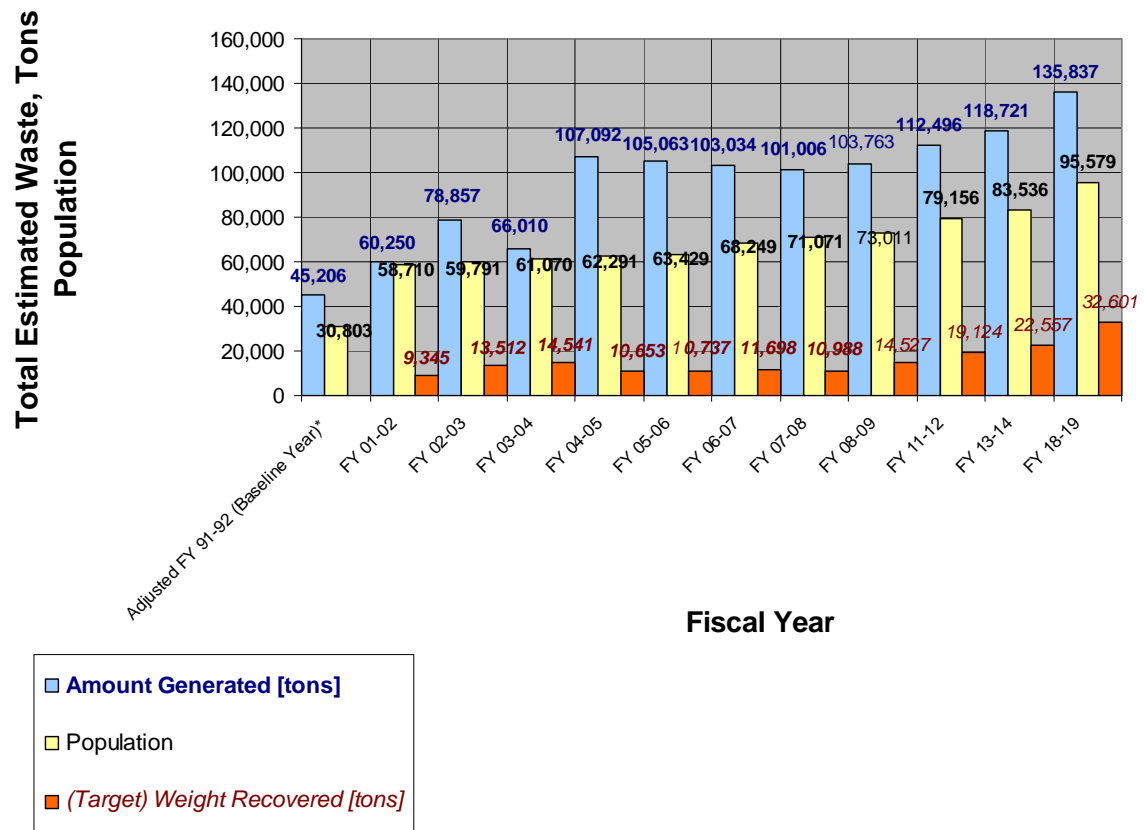
Table 2.3**Target Three-, Five-, and Ten-Year Waste Reduction Goals**

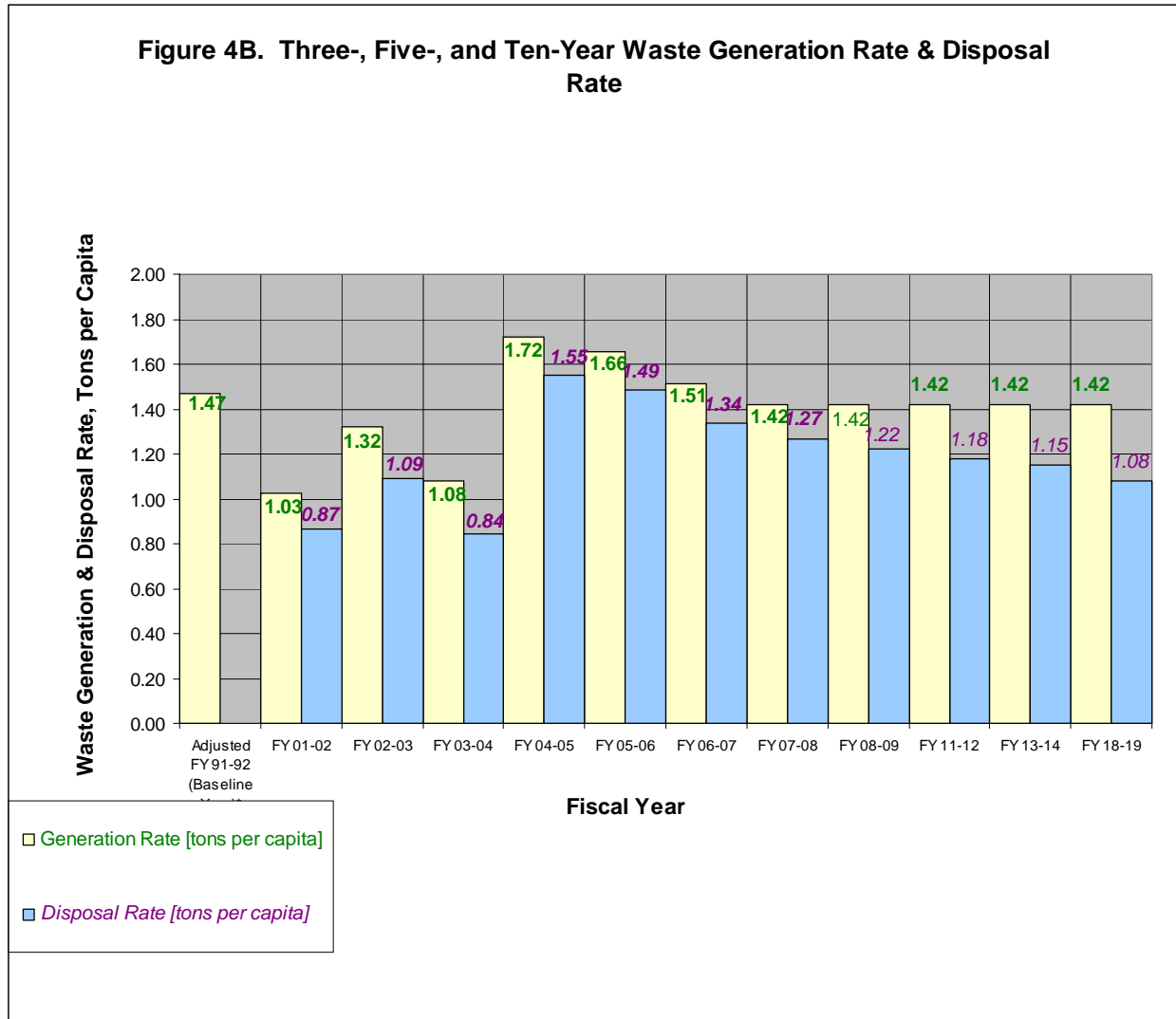
(Based on FY 07-08, Using Revised Goals & Latest Waste Generation Rate)

Calculations	FY 2011-12	FY 2013-14	FY 2018-19
1. Baseline FY 07-08 year per capita disposal rate	1.42	1.42	1.42
2 Percent [% change tons/capita] Waste Reduction Goal (based on FY 04-05 waste disposal rates)	4.00%	6.00%	11.00%
3. Targeted per capita disposal rate [tons/capita]	1.22	1.19	1.12
4. Population Projections	79,156	83,536	95,579
5. Tonnages at baseline disposal rate [tons] (Line 1 * Line 4)	112,402	118,621	135,722
6. Projected tonnages at goal disposal rate [tons] (Line 3 * Line 4)	96,570	99,408	107,048
7. Targeted annual tonnage reductions [tons] (Line 5 - Line 6)	15,831	19,213	28,674

Note: The targeted waste reduction figures in this table are based on increased residential and commercial recycling participation. Reducing C&D waste locally is beyond the scope of all local waste management programs. Locally, C&D waste generation is fueled by local population growth and associated construction activities. FY 07-08 recovery rate is 10.88 %. Target goals are to increase this rate by 1% annually.

Figure 4A. Three-, Five-, and Ten-Year Waste Generation, Population, & Recovery





The local challenges considered in the decision to revise the goals are varied. They are as follows:

- Although the City privatized all commercial waste removal in an attempt to create an economic incentive for the commercial sector to recycle, the commercial waste tonnages continue to increase. The City will continue to promote its current OCC and Office Paper recycling programs to businesses and will evaluate other business and residential recycling programs in the future to reduce the quantity of waste disposed.
- Recycling is voluntary for both the residential and CII sectors.
- Recycling remains an expensive program for municipalities to provide and does not generate sufficient revenues to cover the operating expenses.
- In Fiscal Year 04-05, the downtown business district and multi-family recycling programs were approved, but due to fiscal pressures, the economic slowdown and loss of state monies strained the local budgets. The downtown business district and multi-family recycling programs were researched and proposed by the Solid Waste Services Department, but could not be implemented until Fiscal Year 2005-06 due to budget constraints. The City conducted a survey to the downtown business district, and a pilot program for commingled items such

as bottles, plastics, and cans has been available for downtown businesses since September 2005

- The multi-family recycling pilot program was initiated by first contacting the managers and/owners of apartment complexes to identify appropriate recycling options that will work for their multi-family housing community. The City was confronted by a general lack of interest in participation by the multi-family housing community. At this point, we have only two developments actively participating, with two additional developments about to join the pilot program, giving us a total of four multi-family housing developments participating or about to participate in our pilot recycling program.
- C&D waste generation is fueled by the high growth rate over the past 10-years and the associated activity in the residential construction sector. C&D is currently is 27 percent of the total waste stream.

3.0 Meeting the Waste Reduction Goals

The Solid Waste Services Department continues to provide high quality and reliable services to our customers while seeking effective, cost-effective methods to improve waste reduction. As early as 1991, the City initiated a commercial corrugated recycling program at selected locations within the City. Since 1999, the City has offered expanded corrugated cardboard recycling, and has added office paper recycling to the available services to businesses and institutions within the City. These programs continue to grow, and have contributed significantly to increase local recycling.

The City classifies multi-family housing complexes as businesses, and a does not currently provide garbage or recycling collection at these locations. Although these residents are encouraged to use the drop-off centers provided by Cabarrus County, residents must transport their recyclables to these locations, so most do not participate.

With this in mind, the City is currently providing two commingled pilot programs to expand the available recycling opportunities. The first program consists of providing recycling containers and educational materials to multi-family housing complexes. The City will provide recycling bins for residents. Based on the number of apartment units, the apartment complex may qualify for 95-gallon rollout containers or a 12-yard roll-off container. Both containers are designed for recycling commingled and paper recyclables. The City will empty the container(s) once weekly. Staff will document the amount recyclables generated from the multi-family housing complexes that are participating in the program.

The second program will expand the recycling options available to businesses, focusing on commingled items such as aluminum and steel cans, #1 and #2 plastics, and glass bottles. Currently, this program is limited to the downtown business district. The City provides up to two 64-gallon recycling containers and collects the containers weekly. Staff documents the amount recyclables generated from the businesses that are participating in the program.

Concord has based projections for future waste generation using the current generation rate of 1.42 tons per capita. Waste reduction and recycling strategies are discussed in Section 5.

4.0 The Planning Process and Public Participation

The City of Concord encourages public participation in all aspects of solid waste management. The Solid Waste division of the Solid Waste Services Department of the City of Concord prepared this report.

- An annual Customer Satisfaction Survey is conducted to determine the public's perception of the solid waste management program. The survey results are presented to City Council at their annual planning meeting and used to set goals for changes in the solid waste management program.
- Customer service requests received through our Customer Care Center are maintained in a database and used to establish performance goals and analyzed to measure the effectiveness of all the services provided to our customers.
- Concord has a Recognized Neighborhood program, designed to increase communication with individual neighborhoods and increase their access to City services. A City staff member is assigned as Neighborhood Liaison to assist the neighborhood leaders in finding answers to their questions or obtaining the needed assistance from the appropriate City department. Solid Waste Services personnel attend these community meetings on a regular basis to answer questions, provide education regarding City ordinances or policies, or help resolve service problems. Input from these meetings is used to identify needed changes to service delivery or changes to City ordinances.
- The addition of an Environmental Educator hired in 2007 has increased contact with community organizations and neighborhood associations, and the development of literature to assist in raising the awareness of the importance of recycling and waste reduction. Our Educator is in great demand to visit public school classes and other group meeting to make presentations.
- City Council approved Solid Waste Services Supervisors performing code enforcement related to solid waste violations. The Utility Services Coordinator, two Utility Services Supervisors, and the Director are now sworn code enforcement officers. The Director serves as the Appeals Officer. The Solid Waste supervisors make personal contacts with residents who violate solid waste ordinances as the first and most important step in the enforcement process. These personal contacts have proven valuable in that they allow the Solid Waste Supervisors to communicate the rules and regulations directly to the customers and allows them to receive feedback from the customers directly related to the difficulties of understanding our rules and regulations. This one-on-one communication has increased the understanding among our customers and improved compliance as a result.
- Solid Waste Services Code Enforcement coordinates their activities with the Police Department Code Enforcement Division to enforce the City of Concord solid waste and illegal dumping ordinances. The Police Department Code Enforcement Division also enforces the minimum housing standards section of the City Codes.

A solid waste advisory committee was organized in 1999 to review the solid waste and recycling programs. Improvements and changes currently under consideration are largely in response to their recommendations. No permanent advisory committee is currently active.

Making this plan available for public review prior to taking official action is a priority. A copy of this plan will be made available at City Hall and at the Solid Waste Services Department Director's office for public review. A public notice regarding the public hearing will be placed in the Independent Tribune (Appendix B). A copy of this document will also be placed on the City web-site for permanent review by the public and City coworkers, to encourage broader exposure and greater understanding of the mission and the importance of waste reduction and recycling to the community.

5.0 Solid Waste Management Methods: Assessment of Programs and Description of Intended Actions

5.1 Source Reduction

Current Program: The City has two successful source reduction programs that are targeted at businesses in the City. The first is the **Corrugated Cardboard Recycling Program**. As of June 2008, the City had 281 dumpsters at 258 businesses provided free of charge to promote source reduction. Additionally, 88 customers received loose corrugated collection. In FY 07-08, this program diverted 1,175 tons of recyclable material from the landfill waste stream.

Intended Action: City will continue to provide this service.

The second recycling program is the office or **White Paper Recycling Program**. This program also targets businesses and effective June 2008 had 198 customers. In FY 01-02, the City diverted 81 tons of white papers from the landfill waste stream; in FY 04-05, the amount increased to 101 tons. In FY 07-08, the amount recycled increased to 172 tons.

Intended Action: City will continue to provide this service.

Recycling Pilot Programs: The City of Concord has two pilot programs that have been underway since the Fall of 2005. The participation rate and progress of these two pilot programs is summarized as follows:

Downtown Recycling Program: Staff prepared a survey for the Downtown Business recycling pilot program and hand delivered it to each business. Some businesses completed the survey, others faxed in the completed survey, and the remainder either declined or failed to mail in a completed survey. The survey results are presented below.

- A total of 173 downtown businesses were contacted; only thirty-four (34) responded or completed the form.
- Eight (8) out of the 34 that responded are interested in commingled recycling of aluminum, glass and plastic beverage containers. All eight indicated that they prefer using a rollout type recycling cart placed in their business to collect the recyclables.
- During the initial contact phase, staff promoted our white paper and cardboard business recycling programs; ten (10) new businesses signed up to recycle white paper and cardboard.
- Fourteen (14) of thirty-four (34) respondents stated that they were not interested in any type of recycling.
- Eleven (11) businesses stated they already recycle in some manner, but are not interested in participating in the pilot program.

The City program began by providing the eight businesses that expressed interest in a commingled program with one or more small containers that are designed for commingled aluminum, glass and plastic items only. The number of participating businesses has since grown from eight (8) to twelve (12).

These carts are collected once per week using available City staff. Each business is monitored for compliance and the weight of material collected is recorded. Additionally, commingled collection is provided in the following City buildings: City Hall, the City Hall Annex, the Brown Operations Center, the Market St. Annex, Fire Station No. 3, and the Concord Police Headquarters.

Recyclables are collected and weighed, then delivered to the County drop off center. We are not able to sort through the material. However, we periodically examine the recyclables to establish a profile of the material recycled. Downtown business recycling customers will be limited to white paper, corrugated cardboard and commingled aluminum, glass, and plastic beverage containers.

Intended Action: The City is assuming management of the downtown dumpsters providing waste service to many of these customers, and will monitor they are all paying their waste disposal fee. This fee should motivate participation in the recycling programs.

Multi-family Residential Recycling Program: Multi-family housing construction has increased significantly in the past thirteen years. Multi-family housing complexes are considered businesses and are responsible for their waste removal. Recycling in rental communities is an untapped sector within Concord. Although Cabarrus County has drop-off centers that are available for the residents, the City plans to promote recycling by making it more accessible for these residents. The logistics of such programs and managing the recycling centers are a challenge and will require the cooperation and participation of the management team at the apartment complex. The City of Concord Solid Waste Services staff contacted a total of fifteen (15) apartment complexes and one (1) condominium in the Multi-family Recycling Program.

Although most of the managers were willing to discuss recycling in their complexes, a variety of concerns made them choose to decline. The main concern is that tenants may use recycling receptacles for garbage containers. Not having available space for containers was also an issue, both for the small green bins that would go inside the apartments and the larger rollout or rolloff containers that would be on-site. The managers were also concerned with the constant turn-over of old tenants leaving and new ones coming in. Several complexes indicated they would like a small program to have containers in their common areas (pools, laundry rooms) but without proper management, these containers would likely be used for garbage disposal also. Three of the 14 locations contacted have expressed interest in recycling, although none committed to participate.

Throughout the pilot program, City personnel will monitor tonnages and participation rates. We will continue to correspond with these apartment managers to solicit a recycling program that works for all parties involved. Recycling at multi-family locations will include all items currently accepted from our residential recycling customers. As of June 2008, we have one small condominium complex and one townhouse development that are participating in our pilot

program. Two additional condominium developments have expressed interest, but have not entered the program at this time.

Intended Action: City personnel will continue to pursue additional multi-family developments until we have sufficient numbers to obtain the results necessary to prove to others this will work.

Mixed Paper Recycling Program in Schools: The City of Concord, Cabarrus County, and the Cabarrus County School system partnered to develop a recycled paper collection program available to every school in the Cabarrus County School System by January 2009. This recycling program provides every classroom in the school system with the opportunity to begin recycling waste paper and teaching recycling by practicing recycling. The City of Concord Solid Waste Services Department collects mixed paper weekly from approximately 50 percent of the school facilities while Cabarrus County Solid Waste collects mixed paper from the remaining school facilities. Service was initiated January 2009, although Concord was delayed until April 2009 due to equipment availability, but is now providing collection and provides any needed carts at the school facilities. A state grant was used to pay for a portion of the recycling bins placed into each classroom.

Concord and Cabarrus County are now in discussions with Cabarrus County Schools about providing a commingled beverage container recycling program at each school beginning in the fall of 2009. Participation in this program will require City Council approval and is dependent upon the availability of funding, personnel, and equipment.

Intended Action: If and when funding, personnel and equipment availability allow, the mixed paper recycling program provided to the schools may be expanded to include some businesses in the community. This program may be limited in scope due to budget constraints.

5.2 Collection of Solid Waste

Current Program: In the residential sector the City uses Allied Waste Services/Republic Services to collect rollout container waste, recycling bins and bulky items. The City currently spends approximately \$2.62 million annually for residential waste contract collection. The contractor also provides disposal and recycling at no additional cost to the City. There are 26,642 (FY 07-08) residential collection points over a 63.09 square mile area. Allied Waste Services/Republic Services collected 23,883 tons residentially in FY 07-08 (includes landfilling garbage & bulky waste). This total does not include recycled materials. The collection contract with Allied Waste Services/Republic Services continues through June 30, 2011 with possible extensions.

Commercial, industrial, and institutional customers must contract with a private hauler for waste disposal. Commercial generators in 'strip malls' are required to use dumpster service and are encouraged to partner with adjacent commercial generators for the service.

Commercial generators operating out of a house or store front building may request rollout container service where dumpster service is not available or practical as determined by the Director of Solid Waste. Each building is normally limited to three (3) rollout containers

irrespective of the number of commercial generators located in that building. When more than three (3) rollout containers are required, these situations are evaluated on a case by case basis.

The City established a fee for a rollout container service for businesses of \$20.00 (FY 07-08) per month, per cart. Commercial generators are billed monthly as a part of their City utility bill. Other dumpster exceptions may be granted by the Director, and shall receive the number of rollout containers necessary for the waste stream.

Multi-Family Housing Service is defined as any commercially rented housing in a complex exceeding six (6) units (families or tenants). Housing complexes of six (6) total units or less (e.g. duplexes) will be residentially serviced and may use rollout carts. Complexes larger than six units (e.g. apartment complexes) will be required to utilize dumpsters (unless an exception is granted) and pay for container rental and waste disposal. The City provides information regarding the location of recycling drop off centers to multi-family housing complexes and will furnish tenants with recycling bins to store materials as well as technical assistance in implementing a multi-family recycling program at the complex. The City has implemented a pilot program to study the feasibility of offering multi-family dwellings the opportunity to recycle at their complex. A 12-yard roll off container will be placed on site and individual recycling bins will be given to the tenants

Condominium service is considered residential service, and the City contracts with Allied Waste to service these customers. All new condominium complexes to be constructed in the City of Concord will be designed and built to accommodate the use of dumpsters. Complexes designed and built in a “townhouse” style with detached units may be serviced using rollout carts if deemed practical. The City of Concord pays for residential rollout or dumpster waste removal at condominium complexes.

City crews collect yard waste, appliances, scrap metal, tires, and building material. The City utilizes three rear-loader packer trucks and four knuckle-boom trucks to collect yard waste and building material separately. In the event of equipment down time, the City substitutes front-end loaders and dump trucks to collect limbs.

The City owns five vacuum leaf machines for loose-leaf collection during fall and winter months. Loose-leaf season is from mid-October through February. All leaves and grass must be bagged during the remainder of the year for removal in the routine yard waste collection program.

Residents of the City of Concord are provided biodegradable bags as an alternative to loose leaf collection. The benefits of this program include compliance with federal storm water quality mandates, improved collection efficiencies and decreased costs, elimination of leaf related flood and fire issues, and an expected increase in back yard composting.

The City uses two one-ton dump trucks to collect white goods and metal. White goods are delivered to the Cabarrus County Household Hazardous Waste (HHW) facility for recycling. Approximately 421 tons of white goods and metal were collected in FY 04-05. No scales are

available at the Cabarrus County white goods drop off location, so no weights are reportable. A system to estimate tonnage will be developed for future reports.

Weekly tire collection utilizes dump trucks. The tires are recycled at US Tire Recycling facility in Concord. Last fiscal year (07-08), the City recycled 36 tons of tires.

Two roll off trucks with nine (9) 20,30, and 40-yard containers are used to provide a wide variety of services including loose corrugated delivery, tire and appliance delivery and disposal services for other City departments. The first roll off was purchased in 1999 and greatly improved operational efficiencies of the Department. A second roll off was purchased in 2002, with the capacity to add a vacuum leaf attachment in order to streamline our loose-leaf collection services.

Intended Action: Develop a system to estimate the tonnage of white goods and scrap metal collected will be completed for future reports. No changes are anticipated in this area.

5.3 Recycling and Reuse

Current Program: The recycled amounts collected through City of Concord programs are presented in Figure 6. Allied Waste Services/Republic Services collects commingled recyclables from residents in Concord. The material is delivered to the Mecklenburg County Materials Recovery Facility at 1007 Amble Drive in Charlotte (zip code 28026). Material in the curbside program includes glass, metal, aluminum, steel and plastic food and beverage containers, newsprint, magazines and inserts. Newly added materials include residential corrugated and phone books. Curbside residential recycling is provided at no cost to the city under the existing landfill franchise agreement with Allied Waste Services/Republic Services.

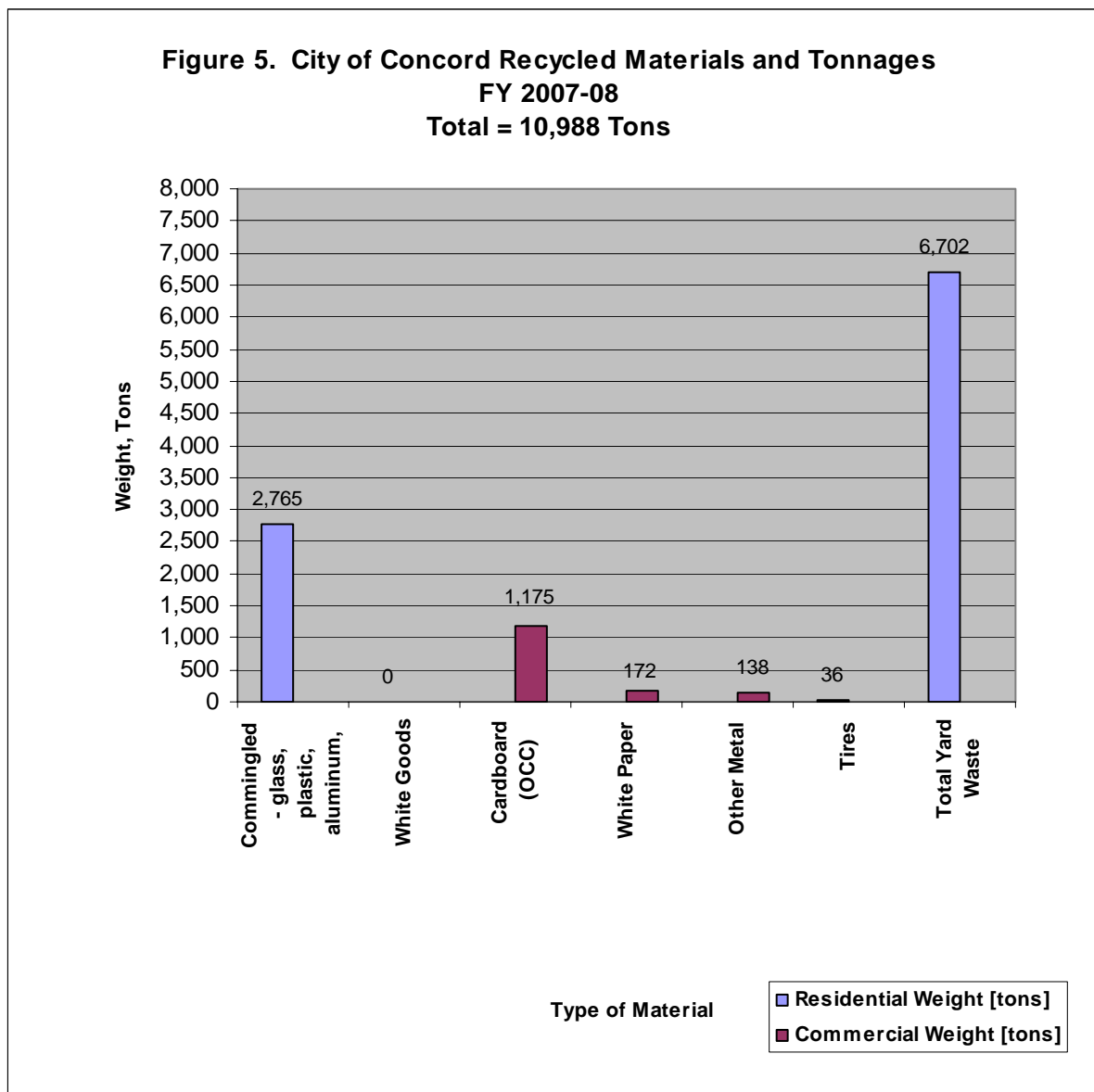
It is estimated that only about 40% of Concord's residents participate in the curbside-recycling program. The Environmental Educator position was filled in May 2007, and an increase of public education has been initiated and is expected to continue to expand the recycling participation rate and is a high priority.

During the Fiscal Year 06-07 the City Council approved a change in the City Code that stated residents will be billed \$9.00 monthly for a second roll out container. Residents who request this service are required to recycle.

For many years, the City has subsidized refuse collection for commercial customers by providing and paying for bulk (dumpster) collection. This very uncommon subsidy among North Carolina cities means there is no economic incentive to reduce, reuse, or recycle waste in the commercial sector. These incentives need to be in place if the City is to meet the State's goals and to extend the life of existing landfills.

Effective March 1, 2001, all commercial enterprises began paying for their own waste collection and disposal. This policy applies to all business, commercial, office and institutional segments including schools, churches, day care centers, and non-profit organizations. Since corrugated cardboard and high-grade office paper are components of most commercial waste streams, the

City is committed to help businesses minimize their waste collection and disposal cost by providing corrugated and high-grade paper recycling programs at no cost.



The City's OCC and office paper programs have been an outstanding success in our waste reduction efforts; currently there are 289 OCC customers, and 198 white office paper customers.

The City contracts with Signature Waste, Inc. to provide 8-cubic yard dumpster specifically designed for corrugated cardboard, and to provide weekly collection for high volume generators. This service does not include higher volume generators such as grocery and department stores. Signature Waste charges a \$24.66 (+ varying fuel surcharges) per month rental fee for the specialized corrugated 8-yard container and charges \$8.02 per pickup. The corrugated is transported to Weyerhaeuser in Charlotte by the hauler.

City personnel provide weekly collection of office paper to 198 customers. Additionally, this crew provides loose OCC collection to 88 customers who do not generate enough OCC to justify an 8-yard container. The City crew has one full-time employee and one 20-yard rear-loading compactor truck. Each customer is serviced a minimum of once weekly.

Weyerhaeuser was paying an average of \$78.00 per ton for corrugated cardboard, generating revenues of approximately \$7,747.20 per month. The City is aware of the market's volatility and the reality that the overall economics may be much different in the future. Based upon an average market price of \$45 per ton, annual cost for the City for the 281 containers currently in place is \$208,320; the net cost to the City of Concord is approximately \$115,354 annually. The City must be prepared to market the recyclables as commodities, although this is sometimes difficult to comprehend. Recyclables have value, but that value can be volatile in the market place, and influenced by changing economic conditions in China or Europe, not just here in the United States.

All office paper materials are delivered to Weyerhaeuser, where the City currently receives \$163.00 per ton. For FY 07-08, the City has collected approximately 172 tons of office paper. As the program grows and funds become available to promote the program, we expect the amounts to increase significantly.

Weyerhaeuser was purchased by International Paper and service rapidly declined. Prices declined even more rapidly in relation to the Yellow Sheet, so the City has transferred delivery to Paper Stock, a division of Sunoco located in Salisbury, NC.

The City also provides collection of scrap metal to all residents on a weekly basis. Scrap metal is currently marketed at Millennium Metals. Appliances are collected on the regular garbage pickup day and are delivered to the Cabarrus County HHW facility for processing and recycling.

Tires are collected by the City on regular pickup day and are delivered to U. S. Tire Recycling on Highway 73 in Concord.

Intended Action: Continue the two pilot programs described in Section 5.1 and implemented in FY 05-06. Limited data due to low participation makes it difficult to evaluate expanded recycling beyond the downtown business district, but the City will continue to make recycling services available to businesses and restaurants located in the downtown business district. Surprisingly, there is limited interest among the multi-family housing communities within Concord to participate in the pilot program. The City will continue to pursue interested apartment management groups as new apartments are constructed to determine what types of collection methods work best in multi-family developments and the related cost, with the goal to expand this service city-wide sometime in the future.

5.4 Composting and Mulching

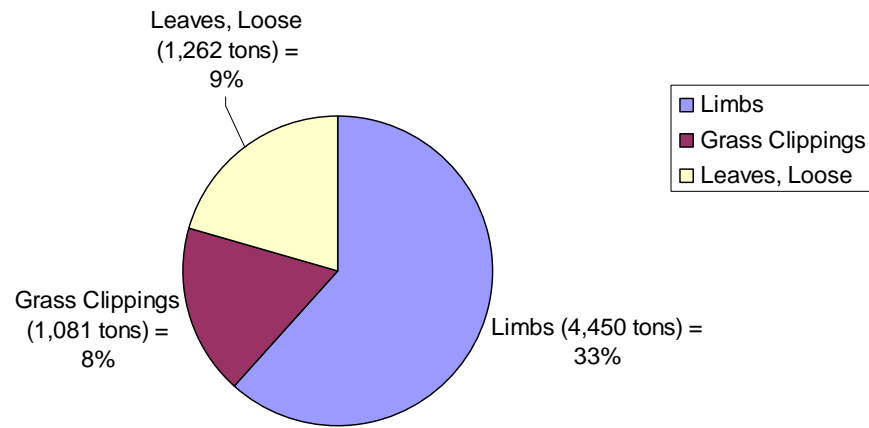
Current Program: Limbs, grass and leaves are collected weekly by City personnel and delivered to a location within the Highway 49 Construction and Demolition (C&D) Landfill. The City has two full-time employees, a 12-foot diameter tub grinder and one front-end loader operating at this location. In December 2004, the City entered into a temporary agreement to provide the

manpower and equipment in exchange for a site to process the City of Concord's yard waste and the yard waste from the Town of Harrisburg, with whom the landfill has a franchise agreement. Since this facility is already equipped with weigh scales, the City is able to obtain exact data relative to material received, processed and shipped out, rather than relying on volume estimates and conversion factors to determine the amounts. The Highway 49 C&D facility is permitted as a yard waste processing and disposal facility, but currently only accepts yard waste from the Town of Harrisburg and the City of Concord. The facility is researching methods to market mulch and compost before entering into a long-term agreement with Concord.

Wallace Farm, a commercial composting facility located in Huntersville, NC, produces a retail soil amendment sold in many garden supply stores. The City of Concord continues to transport ground mulch and excess leaves to Wallace Farm to ensure these materials are used beneficially and recycled. The future of Wallace Farms is uncertain, as the development of exclusive housing communities continues to be constructed around their facility; however Wallace Farm is in the process of renewing their permits for solid waste, stormwater, and wastewater. The City continues to stock pile and deliver compost and mulch for utilization by the City's public golf course, cemeteries, and public housing. The total yard waste components for FY 07-08 are shown in Figure 7.

Intended Action: The City and the owners of the Highway 49 C&D Landfill will continue to negotiate a five-year contract that will allow the City to continue to operate their yard waste processing facility at the landfill. The goal is to complete this contract by June 2010.

Figure 6. Yard Waste By Type FY 07-08
Total = 6,793 tons



5.5 Incineration With and Without Energy Recovery

Current Program: No known incineration of waste, with or without energy recovery, takes place in Concord.

Intended Action: No changes in this planning area are anticipated.

5.6 Transfer of Solid Waste Outside Geographic Area

Current Program: The City does not currently transfer waste outside the region. The Allied Waste-CMS landfill is located within the City limits and all disposed wastes are delivered to that facility. The City may deliver some of its generated construction and demolition material to the Highway 49 C & D Landfill in the future once agreements with the facility owners are completed, but that is not considered outside the geographic area.

Intended Action: No changes in this planning area are anticipated.

5.7 Disposal of Solid Waste

Current Program: In late 2002, Allied Waste Services made a proposal to the City of Concord that included a plan to expand the Allied Waste-CMS Landfill by acquiring property for additional landfill area which would also allow them to add an additional 70 feet of vertical height to the existing landfill. Allied Waste Services stated that this would add an additional 25 to 30 years to the life of the landfill. Allied Waste Services proposed to renew the Franchise Agreement between the City of Concord and Allied Waste Services for 30 years. In the new Agreement, Allied Waste would not charge the City of Concord a disposal fee for the residential waste generated by the City for entire term of the Agreement. If the landfill were to close before the end of the Agreement, Allied Waste Services would still honor the terms of the Franchise Agreement by transferring the waste to another one of their facilities. This gives the City of Concord a place to dispose of its waste through the year 2033.

All residential recycling is collected curbside by Allied Waste Services/Republic Services and transported to a Materials Recovery Facility (MRF) in Mecklenburg County where it is sorted and sent to recycling facilities.

Intended Action: No changes in this planning area are anticipated.

6.0 Education, Special Wastes, Illegal Disposal, and Purchasing: Assessment of Programs and Descriptions if Intended Actions

6.1 Community and School Education

Current Program: The City utilizes its quarterly newsletter, *Concord City Circular*, and other annual mailings to educate residents on proper disposal practices. The Cabarrus County Public Information Office also has a cable television program on which the City has appeared to discuss solid waste issues. The City's web site also provides a wealth of information on solid waste disposal.

Intended Action: The City of Concord hired an Environmental Educator in 2007 who would focus on educational activities public information targeting recycling and waste reduction and stormwater education. The Environmental Educator's responsibilities have been broadened to include Solid Waste, Stormwater, Water Resources, Waste Waster Resources, and Air Quality. Solid Waste educational activities will on strengthening the City web-site, by adding a "Did you know..." section that will be updated bi-monthly; the addition of an online Community Swap Shop, and the Educator Blog. The most exciting goal is creation of a Citizens Recycling Academy, focusing on community leaders initially and then on teachers. The initial emphasis will be to create a corps of community advocates who can promote recycling throughout the community. Once that goal has been achieved, the target audience will shift to interested citizens, encouraging participation from minority and low-income communities.

6.2 White Goods

Current Program: The City of Concord collects all white goods and metal at curbside on the same day as garbage pickup, along with commingled recyclables and yard waste. In addition, the City, along with Cabarrus County, has developed a permanent white goods and household hazardous waste drop-off facility that is now available for use. White goods and other metals are delivered to the facility and the County hires a contractor to extract all the FreonTM and other hazardous/toxic material from the metal so it can be recycled. The facility is within the Concord City limits, and is located on General Services Drive, off Highway 49, and is used by other municipalities in Cabarrus County.

Intended Action: Future action includes making preparation to augment the White Goods Collection program so that these trucks will be able to collect curbside electronics for recycling, with a target date to begin in January 2010 in accordance with North Carolina General Statute **§130A-309.09A(b)(6)e**. The decision to combine these programs is based on the State of North Carolina banning certain materials from landfills contained in General Statute **§ 130A-309.10. Effective January 1, 2011** discarded computer equipment, as defined in G.S. **§ 130A-309.91** and discarded televisions, as defined in G.S. **§ 130A-309.91** are banned from municipal landfills. The City of Concord will pursue the possibility of collecting discarded computer equipment and televisions and deliver them to Cabarrus County. The County will sort and recycle these materials through using a licensed electronics recycler located in Charlotte. However, both the City of Concord and Cabarrus County will delay initiation of these e-waste collection and processing programs until there is evidence the e-waste recycling programs that manufacturers of computers and televisions are to implement for recycling their products do materialize. An

important component of these manufacturer-lead programs is to generate funds to offset the local governments' collection and handling costs.

6.3 Used Tire Management

Current Program: The City of Concord collects used tires from residents at curbside on a weekly basis. The tires are transported to U. S. Tire Recycling located at 6322 Poplar Tent Road in Concord. Businesses are required to properly dispose of tires themselves. In fiscal year 07-08, the City disposed of 36 tons of tires that were picked up a curbside from residents. A disposal fee is attached to all tire sales. U. S. Tire sends a bill to Cabarrus County for the City's tonnage and the County is reimbursed by the State. The tires are ground up and sold to companies to make other materials such as playground equipment or are buried at the facility.

Intended Action: The City of Concord intends to continue the used tire collection program.

6.4 Residential Building Materials

Current Program: The City of Concord provides curbside collection of one (1) cubic yard or less of building materials per week from residential customers. If a resident hires a contractor to do the work, or the amount of material exceeds the one cubic yard limit, it is the resident's responsibility to dispose of this material. The amounts of this material are included in section 1.2 and are shown in Figure 2.

Intended Action: The City of Concord will continue the residential building material collection program. A change to the ordinance that will be presented to City Council for consideration is that any building material resulting from a residential remodeling or construction project that requires a building permit will not be collected by the City of Concord. Regardless of size or quantity of waste building materials generated, the owner or contractor will be required to remove these material solely at his or her cost.

6.5 Lead-acid Batteries

Current Program: The City of Concord encourages all residents to properly dispose of lead-acid batteries. Businesses who sell these items will accept the old batteries for recycling or disposal. Residents are encouraged to use the Cabarrus County HHW facility if they cannot exchange the battery. City employees who collect batteries on empty lots or illegal dumpsites are required to take the batteries to the County facility. Cabarrus County contracts out the disposal of the batteries when they are delivered to their facility.

Intended Action: The City of Concord will continue to encourage residents to exchange batteries or dispose of the batteries at the County HHW facility.

6.6 Used Motor Oil

Current Program: Residents in the City of Concord are required to dispose of used motor oil and filters at the Cabarrus County HHW facility or at businesses in the City that will accept limited amounts. The DPPEA estimated the City of Concord generated 125,748 gallons of used motor oil and 116,447 oil filters in FY 07-08. A list of the businesses that accept limited amounts are included in Appendix G.

The Fleet Services Department collects used oil from City vehicles and uses it to heat the fleet services building. A local recycling company removes excess used oil and transports it for reuse as a fuel source.

Intended Action: New State legislation bans oil filters from municipal landfills beginning October 15, 2009. The City of Concord is currently developing plans to recycle all used oil filters and all excess used motor oil that is not utilized in heating facilities.. Promotion of the new requirement to recycle used oil filters and used oil will be a priority in educational literature for 2009 and 2010.

6.7 Household Hazardous Waste

Current Program: In 2001, Cabarrus County, with help from the City of Concord, opened a HHW Facility (located at 264 General Services Drive in Concord). The site is located on City-owned property leased to Cabarrus County that is situated immediately behind the City's Alfred M. Brown Operations Center Complex off Highway 49. The facility also contains a residential self-service convenience center and is open Monday through Friday from 8:00 AM to 5:00 PM to accept recyclables at the recycling center. The facility is opened two days per month to accept most household hazardous waste including electronics. HHW receiving is scheduled the *First Wednesday* (8:00 AM to 4:00 PM) and *Third Saturday* (8:00 AM to 1:00 PM) of each month.

Intended Action: The City of Concord will continue to encourage residents to use the HHW Facility by including location and contact information in our printed materials and in our public education programs.

6.8 Prevention of Illegal Disposal and Management of Litter

Current Program: The City's Building and Grounds Department has two full-time employees that pick up litter, and all B&G employees are instructed to pick up litter they encounter wherever they see it throughout the City. Additionally, the City's Transportation Department sponsors an "Adopt a Street" program similar to the one promoted by NC Dept. of Transportation. These programs encourage organizations to walk streets and highways 3 times per year and collect litter in an effort to keep our roadways looking beautiful.

'Litter Sweep' and 'Big Sweep' are two successful City and County programs that involve volunteers from both organizations that clean up roadway litter on the main thoroughfares in the City of Concord and along creeks and streams through out the City and County. The 'Litter Sweep' event is conducted semi-annually and the 'Big Sweep' event is conducted annually. These events are planned and conducted by the Environmental Educator to maintain a relevance and vitality to the community.

The Solid Waste Department collects dead animals from the roadway.

All other cases of illegal dumping are referred to the Police Department Code Enforcement Division for action if located on private property or the Solid Waste Services Code Enforcement as outlined within City Code.

The Solid Waste Department was given limited code enforcement responsibilities in FY08 because of increasing solid waste code violations and the need to focus more attention upon the cleanliness and appearance of our public streets. The Superintendent and Crew Leaders are now sworn Code Enforcement Officers, enforcing most of the code violation that occur within the public R/W, primarily solid waste violations or R/W obstructions.

Reports of illegal dumping, littering or dead animals are received at the Customer Care Center and dispatched to the proper contact person for appropriate response. Contact representatives include:

- Customer Care Center – Business hours only, 704.920.5555
- Illegal Dumping, located on private property – Mitchell Furr, 704.920.5145
- Illegal Dumping, located in public Right of way – Kay Dellinger, 704.920.5360
- Litter Collection – David Ratchford, 704.920.5380
- Dead Animals – Valerie Thompson, 704.920.5361
- Spill Response – Fire Department Haz-Mat, 911

Intended Action: No changes in the current program are anticipated.

6.9 Purchase of Recycled Materials and Products

Current Program: The City has a procurement policy to help foster strong recycling markets. The City will specify preference to products containing recycled materials providing those products are economically competitive with products containing virgin materials and that it has been demonstrated that the product performs favorably with those containing virgin materials.

Intended Action: No change is anticipated at this time. If recycled C&D materials become available in this region, the City will evaluate utilizing this material as beneficial fill in construction projects.

6.10 Disaster Response

Current Program: The City is in good shape relative to equipment and personnel for natural disaster response. This issue was one of the considerations in deciding to purchase the high volume tub grinder versus contract grinding. Other waste materials can be disposed of in Concord at the Allied Waste-CMS landfill and the Cabarrus County landfill.

In the aftermath of the Ice Storm of 2002, the City of Concord was one of the few municipalities in the area not to contract out the disposal of the waste generated by this event. Although some additional trucks and a commercial tub grinder were contracted out, all other equipment used and labor performed were by the City of Concord. The City staff saw the need to purchase an additional knuckle boom truck that was delivered in July 2003, giving the City a total of five of these trucks.

See Appendix G for documentation related to the City of Concord's current disaster response plan. Included are the Disaster Response Plan, a list of temporary debris storage sites, a listing of selected local contractors, and a list of available City resources. ***Please note that the Disaster Response Plan is currently undergoing revision and the plan included herein is the old plan.***

Intended Action: City personnel are currently engaged in a major update to the Disaster Response Plan and to identify needed resources to respond appropriately to a variety of possible disasters.

6.11 Collection and Recycling of Discarded Computers and Televisions (E-Waste)

Current Program: Cabarrus County collects electronics on the 1st Wednesday and 3rd Saturday of each month. Copiers and items with cathode ray tubes (CRTs) are charged a fee for disposal. The County also accepts electronics from businesses, however, additional charges may be applied.

Intended Action: In response to the State of North Carolina's ban on disposal of discarded televisions and discarded computers in municipal landfills, the City of Concord is considering implementation of an e-waste curbside collection program. The City is considering a joint effort with Cabarrus County, with Cabarrus County providing sorting, storage and recycling of e-waste collected by the City of Concord and other municipalities within Cabarrus County.

Concord is making preparation to augment the White Goods Collection program so that these trucks will be able to collect curbside electronics in addition to White Goods and scrap metal for recycling, with a target date to begin January 1, 2010 as specified in § 130A-309.10. The decision to combine these programs is based on the State of North Carolina banning certain materials from landfills contained in General Statute § 130A-309.10. **Effective January 1, 2011** discarded computer equipment, as defined in § 130A-309.91 and discarded televisions, as defined in § 130A-309.91 are banned from municipal landfills. The City of Concord will pursue the possibility of collecting discarded computer equipment and televisions and deliver them to Cabarrus County. The County will sort and recycle these materials through using a licensed electronics recycler located in Charlotte. However, both the City of Concord and Cabarrus County will delay initiation of these e-waste collection and processing programs until there is evidence the e-waste recycling programs that manufacturers of computers and televisions are to implement for recycling their products do materialize. An important component of these manufacturer-lead programs is to generate funds to offset the local governments' collection and handling costs.

6.12 Management and Disposal of Abandoned Manufactured Homes

Current Program: The City of Concord Police Department Code Enforcement Division enforces minimum housing standards that apply to all housing including manufactured housing and mobile homes under City of Concord Code of Ordinances, **Chapter 14 BUILDINGS AND BUILDING REGULATIONS** and by reference the following State laws:

State law references: Failure of owner of property to comply with orders of public authorities, G.S. 14-68; warrants to construct inspections, G.S. 15-27.2; building code council and building code, G.S. 143-136 et seq.; North Carolina Code Officials Qualification Board, G.S. 143-151.8 et seq.; enforcement of insulation and energy utilization standards, G.S. 143-139.2, 143-151.26 et seq.; manufactured housing and mobile homes, G.S. 143-143.8 et seq.; technical ordinances, G.S. 160A-76; regulating and licensing businesses, trades, etc., G.S. 160A-194; building inspection, G.S. 160A-411 et seq.; minimum housing standards, G.S. 160A-441 et seq.

The City will declare the abandoned mobile home subject to demolition following procedures presented in Section 14-47. A contractor will be hired and a lien placed upon the property for all cost associated with the removal of the abandoned mobile home.

The home is emptied of all household goods and appliances, and these materials shall be properly stored, recycled or disposed. All mercury switches, smoke detectors, and other hazardous waste will be removed and properly disposed according to state and federal law. The contractor will recycle all items that can be separated for recycling as the mobile home is demolished, and the debris separated as necessary for acceptance at the local C & D landfill.

Intended Action: No changes to the existing program are anticipated.

7.0 Solid Waste Cost and Financing

7.1 Description and Assessment of Cost

The Solid Waste & Recycling Department provides a high level of solid waste removal services and recycling to residents, and commercial recycling to Concord businesses. The City contracts residential curbside refuse and recycling collection to Allied Waste Services/Republic Services and commercial recycling is contracted with Signature Waste, Inc. Commercial refuse collection is privately contracted by each business.

The current Solid Waste and Recycling budget summary is presented in Table 7.1. All funding comes from the general fund. The impact of state revenue losses is evident the budget reductions indicated.

Table 7.1
FY 07-08 Budget Summary

<i>Cost Center #: 4710</i>	2004-2005	2005-2006	2005-2006	2006-2007	2006-2007	2007-2008
	Actual Expenditures	Council Approved*	Actual Expenditures**	Council Approved	Actual Expenditures**	Council Approved
Personnel Services	\$1,371,327	\$1,371,386	\$1,159,944	\$1,666,725	\$1,596,504	\$1,564,329
Operations	\$2,278,394	\$2,490,253	\$2,410,192	\$2,928,226	\$2,993,772	\$3,402,728
Capital Outlay	\$58,121	\$261,307	\$259,392	\$277,000	\$150,671	\$524,291
Debt Service	\$127,359	\$19,606	\$19,607	-	-	-
Transfers				\$16,260	-	-
Cost Allocations	\$383,344	\$322,118	\$442,416	\$432,150	\$469,444	\$466,026
Total Expenditures	<u>\$4,218,545</u>	<u>\$4,464,670</u>	<u>\$4,291,551</u>	<u>\$5,320,361</u>	<u>\$5,210,391</u>	<u>\$5,957,374</u>
% budget change	-6%		2%		21%	14%
Total Revenues	\$147,439	\$217,380	\$382,071	\$430,000	\$573,951	\$594,000
Net Costs	\$4,071,107	\$4,247,290	\$3,909,480	\$4,890,361	\$4,636,440	\$5,363,374
* as amended						
**unaudited						
Authorized FTE	31.00	32.49	32.49	34.00	34.00	34.00

7.2 Description of Financing Methods

The Allied Waste-CMS Landfill is the primary disposal site for the City of Concord; Allied Waste Services/Republic Services is also the contracted hauler for the City of Concord. The FY 2007-2008 cost for collection was \$7.57; this price is adjusted annually based on the Consumer Price Index. The City is billed monthly by Allied Waste Services/Republic Services based on the residential house count that is adjusted semi-annually in January and July. Through the franchise agreement between the City and Allied Waste-CMS landfill, there are no disposal fees

and the City receives free collection of co-mingled recycling by Allied Waste Services/Republic Services.

In FY 2005-2006, the City of Concord signed a three-year extension with Allied Waste Services/Republic Services for residential garbage collection. The cost for collection was adjusted to \$7.27 per collection points based on the Consumer Price Index. Due to the recent volatility of fuel cost, the City of Concord also agreed to a fuel surcharge. Fuel adjustments will be applied monthly and calculated using the monthly average on-highway diesel fuel price for the Lower-Atlantic Region published by the U.S. Department of Energy, Energy Information Administration for the previous month. If the diesel fuel price goes down, the fuel adjustment will also be reduced. The fuel adjustment will be capped at six (6) percent. If the diesel fuel price exceeds 270 cents per gallon for a 90-day period, the Contractor can request in writing for the City to consider raising the fuel adjustment cap. City Council approval will be required for adjusting the fuel adjustment cap.

Some businesses in the City do not have space and/or generate enough waste to justify a commercial dumpster. With this in mind, the City offers up to three (3) rollout containers to businesses at a charge of \$20.00 (FY 07-08 rate) per unit per month. This service is billed separately by Allied Waste on a monthly basis.

The City provides programs made available to businesses for free collection of corrugated cardboard and office paper, reducing the amount of commercial waste stream requiring disposal. The City provides an 8-cubic yard dumpster specifically designed for corrugated cardboard, and provides weekly collection for high volume generators. Collection is provided under contract with Signature Waste. This service does not include higher volume generators such as grocery and department stores. Signature Waste charges a \$24.66 per month rental fee in the specialized corrugated 8-yard container and charges \$8.02 per pickup. The corrugated is transported to Weyerhaeuser in Charlotte by the hauler.

The City provides white office paper recycling free of charge to businesses residing in the City of Concord. This program is implemented using City resources only. One full-time employee and a 20-cubic yard rear-loading garbage truck are used on a weekly route. In 2004, the Finance Department conducted a full cost analysis of the program. The cost to the City was \$98,672.00 per year. The City of Concord collects and hauls corrugated cardboard and office paper to Weyerhaeuser, located at 201 East 28th Street in Charlotte. Table 7.2.1 presents the revenues generated by these programs. All revenue is allocated back to the City of Concord general fund and not to the Solid Waste Department.

Table 7.2 Solid Waste Cost & Fact Sheet**Residential Garbage Collection**

Residential Households, FY 2007-08	26,642
Population, July 2008	71,071
Tonnage Collected, FY 2007-08	23,883
Tons Collected per Household	0.896
Tons Collected per Resident	0.336
FY 2007-08 Total Annual Contractor Cost @ \$7.57 per unit	\$2,456,200
Cost per Ton, Collection Only	\$94.30
Contract Cost per Household, Annual	\$92.19
Full Cost per Household, Annual	\$103.00
Cost per Resident, Annual	\$34.56

Commercial/ Roll-Out Carts

Monthly Per Unit Cost, FY 2007-08	\$20.00
No. Businesses Serviced (June 2008)	260
Total No. Commercial Rollout Carts (June 2008)	380*
Annual Tonnage Collected	741**
Unit Cost Per year	\$206

*Note: Maximum of three carts per business; customers are billed for this service

**Note: Average 75 lbs per container.

Commercial Corrugated Recycling

No Customers, dumpster service (June 2008)	258
No. 8-yd dumpsters (June 2008)	281
No. Customers, loose collection (June 2008)	88
Contract Cost per Pick-up, FY 07-08	\$8.02
Average Total Monthly Pickups	281
Annual Tonnage Collected	1,175
Full Cost per Year	\$220,263
Average Cost per Ton	\$125
Revenue Generated from OCC Recycling	\$92,966

Commercial Office Paper Recycling

No. Customers	198
Average Monthly <i>Revenue</i> per Collection Point	\$32
Average Total Monthly Pickups	792
Annual Tonnage Collected	172
Full Cost per Year	\$21,710
Revenue Generated from Office Paper Recycling	\$28,133

8.0 Facilities and Resources Available Through Private Enterprise

Allied Waste Services/Republic Services: Allied Waste Services/Republic Services owns and operates the Allied Waste-CMS Landfill at Lowes Motor Speedway in Concord. The City has a 30-year franchise agreement with Allied Waste that continues through 2033. A summary of the franchise agreement provisions follows:

1. Allied Waste-CMS will dispose of the City's waste throughout the 30-year agreement. If the landfill closes before 2033, Allied Waste will construct a transfer station and transport the waste to another landfill.
2. Allied Waste-CMS will begin to pay the City a host fee of \$0.40 per ton once the new permit is issued by NCDENR, and increase the host fee to \$0.75 per ton (\$0.50/ton to the City of Concord and \$0.25/ton to an interest-bearing account that is refundable to BFI) once the new cells begin operation.
3. A portion of the host fee (\$0.25 of the \$0.75/ton) will be reserved for refund to Allied Waste if they fulfill all the conditions of the franchise agreement. This provision is important to assure proper disposal continues to be available for the next 30 years.
4. A portion of the host fee will be used to fund the Environmental Educator Specialist position in the Solid Waste Department.

Allied Waste Services/Republic Services: Allied Waste Services/Republic Services collects residential solid waste through a contract with the City of Concord. This operation is located within the City of Concord on the Allied Waste-CMS Landfill property. The current collection contract continues through June 30, 2011, and includes possible renewals beyond that date.

Signature Waste: The City of Concord has a two-year agreement with Signature Waste to provide the City's cardboard collection program for businesses. The former contractor, South Point Waste filed for bankruptcy in early 2004. The City pays a rental fee of \$24.66 per month per container and a tipping fee of \$8.02 per container. This business-recycling program continues to be a success and Signature Waste has performed well since taking over the program from South Point.

Weyerhaeuser/International Paper: The City of Concord currently uses Weyerhaeuser Recycling located at 201 East 28th Street in Charlotte to recycle the City's cardboard and office paper. Signature Waste collects the cardboard and delivers it to Weyerhaeuser for processing. City personnel also collect the office paper and deliver it to Weyerhaeuser for recycling. The City receives monthly reports detailing the amounts and number of loads from the company. Weyerhaeuser was purchased by International Paper and the new management has not been responsive to the City's needs, causing increasing dissatisfaction with the relationship.

The City no longer plans to continue doing business with Weyerhaeuser/International Paper, and is now delivering recyclable paper and cardboard to Paper Products located Salisbury, NC. Paper Products offers a better price per ton than Weyerhaeuser and it takes less time to drive the round trip to Salisbury than it does to Charlotte.

Wallace Farm: Although the City has no formal agreement with this company, Wallace Farm, located at 14410 Eastfield Road in Huntersville, North Carolina, sells bulk compost and fertilizer to various businesses in the region. Due to the amount of yard waste that is generated by the City, it becomes necessary to haul away the material to another compost facility to make space available for incoming material to be ground into mulch. Wallace Farms sends trucks as needed to haul away the excess leaves and mulch that the City cannot give away or other departments cannot use.

While the City of Concord will continue using Wallace Farm for the immediate future, we search for alternative disposal sites for the mulch created from our grinding operations to assure reliable alternative disposal sites are available.

Millennium Metals: All departments in the City of Concord are encouraged to recycle. The Solid Waste and Recycling department stages a minimum of three 30-yard roll-off containers at the Alfred M. Brown Operations Center that are labeled for depositing copper only, aluminum only, and scrap metal. The water department uses these bins to recycle old water meters with copper lines. The Electrical department uses these bins to recycle aluminum wire, old meter boxes, and other aluminum material. The Department will also provide roll-off containers at large job sites for the departments to use for recycling purposes. Currently, the City uses Millennium Metals to market the recyclables that the City delivers on a weekly basis and to separate the material. The City usually receives the revenue from the metal the following business day, which is deposited in the City's general fund. The tonnages that are collected are included in the report with the residential collection of metals/white goods. Millennium Metals is a local metal recycler in Concord.

At the present time, the City of Concord will continue to use Millennium Metals to recycle scrap metal generated by City operations.

Foils, Inc.: Foils scrap metal is located on Highway 49 in Cabarrus County between Concord and Harrisburg. Foils remains an alternate recycler for scrap metal.

Appendix A
Resolution of Adoption

**RESOLUTION ACCEPTING AND ENDORSING THE 2009 TEN YEAR
COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN FOR THE CITY OF
CONCORD, NORTH CAROLINA**

WHEREAS, it is a priority of the City of Concord to protect human health and the environment through safe and effective management of municipal solid waste;

WHEREAS, the reduction of the amount and toxicity of the local waste stream is a goal of the City of Concord;

WHEREAS, equitable and efficient delivery of solid waste management services is an essential characteristic of the local solid waste management system;

WHEREAS, it is a goal of the City of Concord to maintain and improve its physical appearance and to reduce the adverse effects of illegal disposal and littering;

WHEREAS, the City of Concord recognizes its role in the encouragement of recycling markets by purchasing recycled products when it is feasible;

WHEREAS, involvement and education of the citizenry is critical to the establishment of an effective local solid waste program;

WHEREAS, the State of North Carolina has placed planning responsibility on local governments for the management of solid waste;

WHEREAS, NC General Statute 130A-309.09A(b) requires each unit of local government, either individually or in cooperation with other units of local government, to update the Ten Year Comprehensive Solid Waste Management Plan at least every three years;

WHEREAS, the City of Concord Solid Waste Services Department has undertaken and completed a long-range planning effort to evaluate the appropriate technologies and strategies available to manage solid waste effectively;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CONCORD, NORTH CAROLINA:

That the City of Concord's 2009 Ten Year Comprehensive Solid Waste Management Plan is accepted and endorsed and placed on file with the City Clerk this ____th day of August 2009.

Adopted this the _____ day of August 2009.

ATTEST:

CITY COUNCIL
CITY OF CONCORD
NORTH CAROLINA

Kim J. Deason, City Clerk

J. Scott Padgett, Mayor

Appendix B
Copy of Public Notice

NOTICE OF PUBLIC HEARING

Concord City Council

Thursday, August 13, 2009 at 7:00 p.m.

Municipal Building Council Room, 26 Union Street, South

The public will take notice that the Concord City Council will conduct a public hearing on Thursday, August 13, 2009 at 7:00 P.M. in the Council Chambers of the Municipal Building, 26 Union Street South, to receive input relative to the *Three Year Update* to the City of Concord's *Ten Year Comprehensive Solid Waste Management Plan*. The plan is available for public inspection in the office of the City Clerk located at 26 Union Street South, Concord NC 28025 or in the office of the Solid Waste Services Director located at 850 Warren C. Coleman Boulevard, Concord, NC 28025.

IN ACCORDANCE WITH ADA REGULATIONS, PLEASE NOTE THAT ANYONE WHO NEEDS AN ACCOMMODATION TO PARTICIPATE IN THE MEETING SHOULD NOTIFY THE CITY CLERK AT 704-920-5205 AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE MEETING.

This is the 5th day of August, 2009. (TDD 1-800-735-8262)

ADVERTISED SUNDAY, AUGUST 9, 2009

Kim Deason, City Clerk

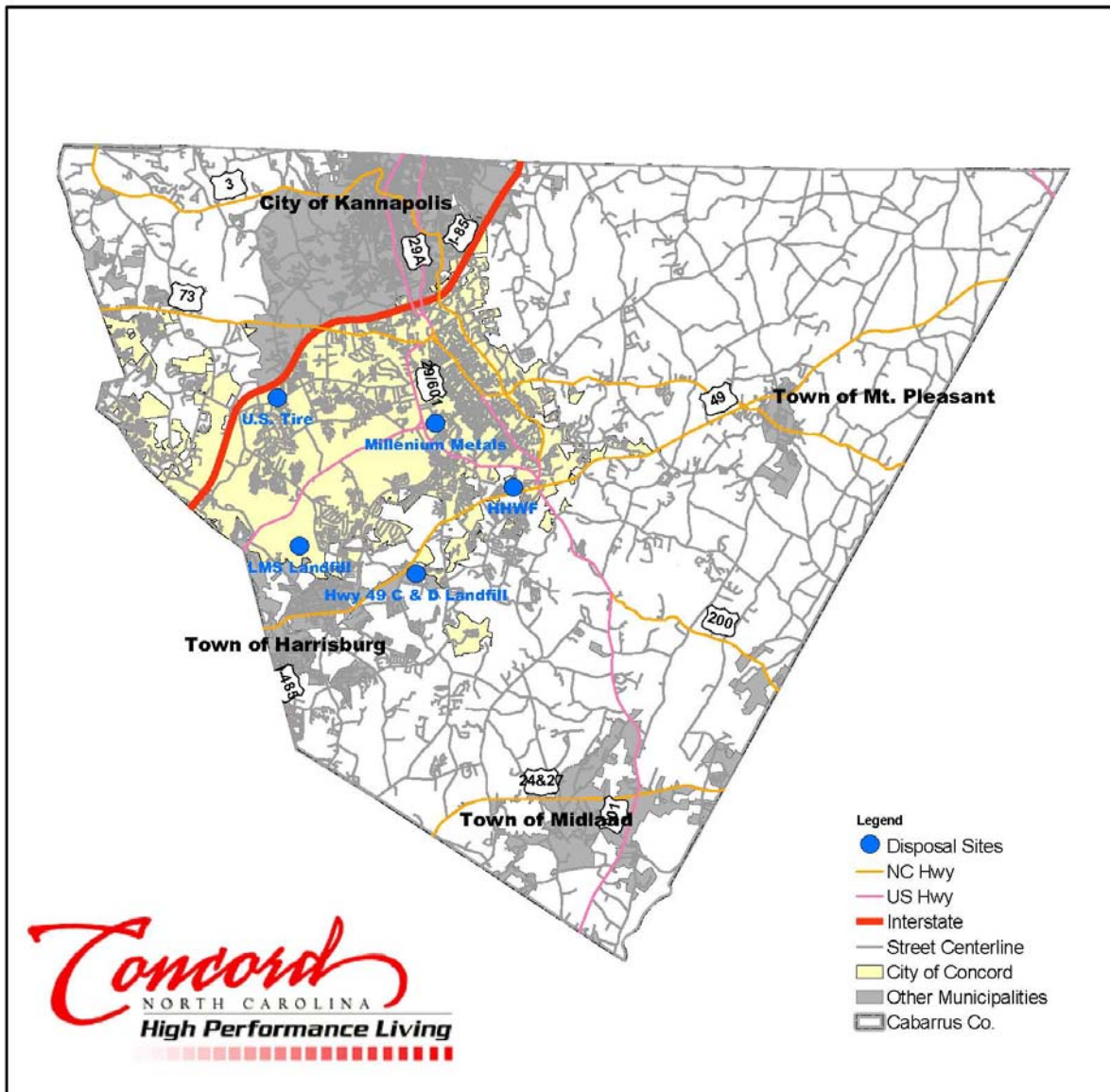
ADVERTISE ONCE

Sunday, August 9, 2009

In the "Independent Tribune", as a block advertisement.

Appendix C

Map of Facilities and Disposal Sites



Appendix D – WASTE CHARACTERIZATION GRAPHS AND SUMMARY

Waste Generation by Sector, FY 2007-08

Type of Waste	Weight [tons]	Percent
Total Actual Residential Landfilled Garbage = 23,883 tons And Total Recycled Materials = 9,503 tons	33,386	33%
Total DPPEA-Estimated Commercial, Industrial, and Institutional (CII) Landfilled Garbage = 38,708 tons And Recycled Materials = 1,485 tons	40,193	40%
DPPEA-Estimated Construction & Demolition (C&D) Debris, 27,427 tons	27,427	27%
Total	101,006	100.00%

Recycled Materials Collected by the City of Concord FY 2007-08

Material	Residential Weight [tons]	Commercial Weight [tons]	Total Weight [tons]
Commingled - glass, plastic, aluminum, steel cans, newsprint	2,765		2,765
White Goods	~see Cabarrus Co.~		~see Cabarrus Co.~
Cardboard (OCC)		1,175	1,175
White Paper		172	172
Other Metal		138	138
Tires	36		36
Total Yard Waste	6,702		6,702
Total Recyclables	9,503	1,485	10,988

FY 07-08 Residential and CII Waste Stream Generation Components

Using 2008 DPPEA Estimates

Material Category	Tons Generated
Total Paper = 19,173 tons	19,173
Total Glass = 2,572 tons	2,572
Total Plastic = 3,800 tons	3,800
Aluminum Cans = 411 tons	411
Steel Cans = 717 tons	717
White Goods = 1,063 tons	1,063
Pallets & Wood Crates = 4,122 tons	4,122
Food Waste = 7,945 tons	7,945
Textiles = 1,712 tons	1,712
Electronics = 463 tons	463
Other [Industrial Process Wastes, Packaging Materials, Post-Industrial Textiles, Misc. Durables, etc.]	31,601
TOTAL	73,579

Figure 2.
Waste Generation by Sector, FY 2007-08
Total Estimated = 101,006 tons

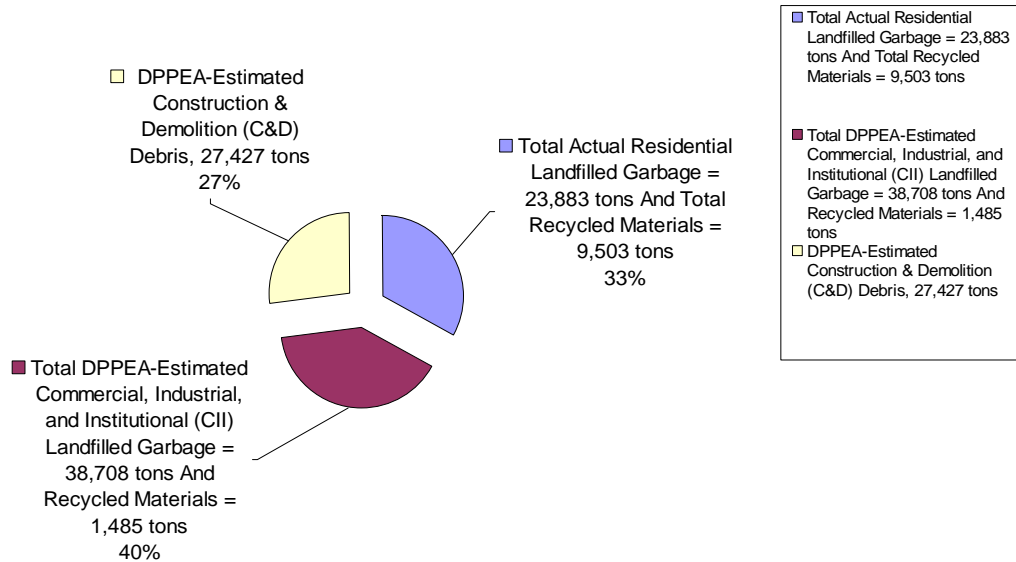
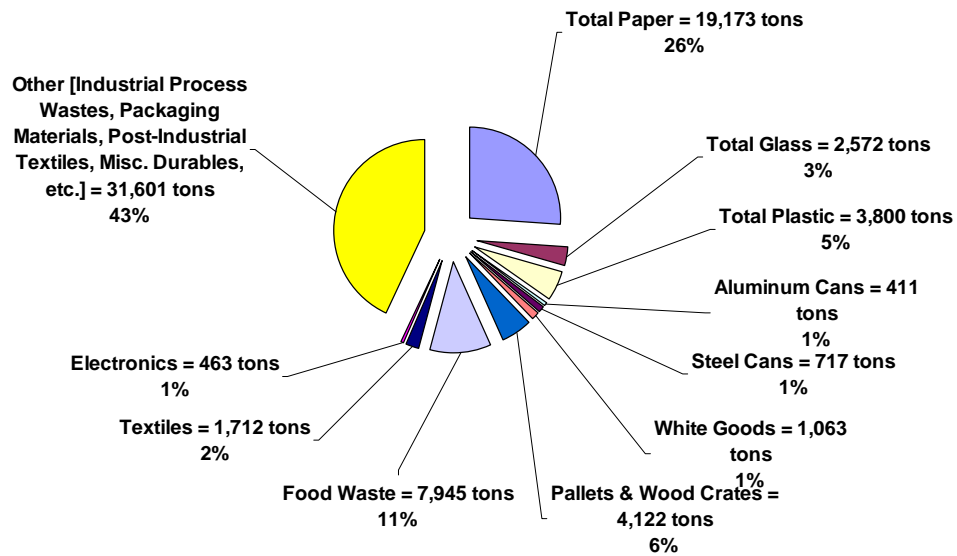


Figure 3. City of Concord
FY 07-08 Estimated Residential & CII Waste Stream Generation
Components
 Using FY 07-08 DPPEA Estimates
 Total = 73579 tons



Appendix E

Waste Reduction Goal Sheet (3-yr, 5-yr and 10-yr)

NC Local Government Ten Year Solid Waste Management Plan

2003 3-year Update

2006 3-year Update

2009 3-year Update

Local Government Name: The City of Concord

Previously established FY 2008-09 waste recovery rate goal: **14%**

After considering our government's current and projected solid waste activities, resources, population and economic growth will the FY 2008-09 waste reduction goal change? Yes

Revised waste recovery rate goal FY 2011-12 **17.0%** (based on FY 04-05 rates)

Revised waste reduction goal FY 2013-14 **19.0%** (based on FY 04-05 rates)

Revised waste reduction goal FY 2018-19 **24.0%** (based on FY 04-05 rates)

Table 2.1
Three-, Five-, and Ten-Year Waste Generation Rate & Waste Disposal
Rate

Fiscal Year	Population	Amount Generated [tons]	Generation Rate [tons per capita]	Amount Disposed [tons]	Disposal Rate [tons per capita]	(Target) Recovery [%]	(Target) Weight Recovered [tons]
Reported FY 91-92 (Baseline Year)*	32,544	34,619	1.06				
Adjusted FY 91-92 (Baseline Year)*	30,803	45,206	1.47				
FY 01-02	58,710	60,250	1.03	50,905	0.87	15.51%	9,345
FY 02-03	59,791	78,857	1.32	65,345	1.09	17.13%	13,512
FY 03-04	61,070	66,010	1.08	51,469	0.84	22.03%	14,541
FY 04-05	62,291	107,092	1.72	96,439	1.55	9.95%	10,653
FY 05-06	63,429	105,063	1.66	94,326	1.49	10.22%	10,737
FY 06-07	68,249	103,034	1.51	91,336	1.34	11.35%	11,698
FY 07-08	71,071	101,006	1.42	90,018	1.27	10.88%	10,988
FY 08-09	73,011	103,763	1.42	89,236	1.22	14.00%	14,527
FY 11-12	79,156	112,496	1.42	93,372	1.18	17.00%	19,124
FY 13-14	83,536	118,721	1.42	96,164	1.15	19.00%	22,557
FY 18-19	95,579	135,837	1.42	103,236	1.08	24.00%	32,601

*Note - The reported FY 91-92 waste disposal tonnages did not include any C&D waste. The adjusted FY 91-92 figures have been revised in this table to reflect review of data originally submitted to more accurately reflect the impact of local waste reduction initiatives. The adjusted value has increased from 1.06 to 1.47 tons per capita. The baseline FY 91-92 figure is used to calculate reduction percentages in Table 5a. The FY 01-02 waste generation rate is used to calculate the current waste reduction goals, beginning with 5 percent in FY 05-06. The current 1.55 tons per capita generation rate has been used to estimate future waste disposal tonnages

Table 2.2**Target Three-, Five-, and Ten-Year Waste Reduction Goals**

(Based on FY 91-92, Using Revised Goals & Latest Waste Generation Rate)

Calculations	FY 2011-12	FY 2013-14	FY 2018-19
1. Baseline FY 91-92 year per capita disposal rate	1.06	1.06	1.06
2 Percent [% change tons/capita] Waste Reduction Goal (based on FY 04-05 waste disposal rates)	-15.09%	-12.26%	-5.66%
3. Targeted per capita disposal rate [tons/capita]	1.22	1.19	1.12
4. Population Projections	79,156	83,536	95,579
5. Tonnages at baseline disposal rate [tons] (Line 1 * Line 4)	83,905	88,548	101,314
6. Projected tonnages at goal disposal rate [tons] (Line 3 * Line 4)	96,570	99,408	107,048
7. Targeted annual tonnage reductions [tons] (Line 5 - Line 6)	-12,665	-10,860	-5,735

Note: DENR requires all calculations be based on the reported FY 91-92 figures. Therefore, the waste reduction goals calculated using the FY 91-92 and the targeted annual reduction tonnages result in negative numbers. When considering the negative percentages reported in line 2, remember we have experienced a 39.6 percent increase in generation rate due largely from adding C&D to the latest numbers, but omitting them from the FY 91-92 calculations.

Table 2.3**Target Three-, Five-, and Ten-Year Waste Reduction Goals**

(Based on FY 07-08, Using Revised Goals & Latest Waste Generation Rate)

Calculations	FY 2011-12	FY 2013-14	FY 2018-19
1. Baseline FY 07-08 year per capita disposal rate	1.42	1.42	1.42
2 Percent [% change tons/capita] Waste Reduction Goal (based on FY 04-05 waste disposal rates)	4.00%	6.00%	11.00%
3. Targeted per capita disposal rate [tons/capita]	1.22	1.19	1.12
4. Population Projections	79,156	83,536	95,579
5. Tonnages at baseline disposal rate [tons] (Line 1 * Line 4)	112,402	118,621	135,722
6. Projected tonnages at goal disposal rate [tons] (Line 3 * Line 4)	96,570	99,408	107,048
7. Targeted annual tonnage reductions [tons] (Line 5 - Line 6)	15,831	19,213	28,674

Note: The targeted waste reduction figures in this table are based on increased residential and commercial recycling participation. Reducing C&D waste locally is beyond the scope of all local waste management programs. Locally, C&D waste generation is fueled by local population growth and associated construction activities. FY 07-08 recovery rate is 10.88 %. Target goals are to increase this rate by 1% annually.

Appendix F

Planning Element Sheets

Plan Of Action: Source Reduction

1. Source Reduction
2. Collection
3. Recycle and Re-Use
4. Composting and Mulching
5. Incineration With/Without Energy Recovery
6. Transfer of Solid Waste Outside of Geographic Area Covered by the Plan
7. Disposal of Solid Waste
8. Education with Community and Through Schools
9. Management of Special Waste Elements
10. Prevention of Illegal Disposal and Management of Litter
11. Purchasing of Recycled Products
12. Disaster Response Plan
13. E-waste Collection and Recycling of Discarded Computers and Televisions, as defined in NC GS 130A-309.91
14. Management of Abandoned Manufactured Homes as required in NC GS 130A-309.113(a)

Planning Work Sheets: Years 2009 to 2019					
Category: 1.0 – Source Reduction					
Completed Actions		Incomplete Actions		New/Revised Actions	
Key Actions		Key Actions	Why Incomplete?	Key Actions	Date Due Estimated Tons Diverted in 10 th Year
Continued pilot study for expanding recycling in downtown business district initiated in 2005		Goal: Provide paper, commingled beverage container, and corrugated collection, with goal to promote recycling services and to estimate cost to expand these services city-wide	1. – Businesses slow to participate in programs with no financial incentive; 2. – ABC businesses unwilling to utilize a pilot program to recycle glass & plastic containers.	City is assuming over all management of the dumpsters serving many of these businesses and will monitor their waste disposal fee payments. This change should encourage participation in recycling.	14% - 14,527 Tons
Continued pilot study for providing recycling at multi-family housing developments initiated in 2005		Evaluate several alternative programs and cost to provide at multi-family developments	Multi-family housing managers refusal to participate in pilot program	Continue to seek out multi-family units where City can conduct recycling studies to evaluate alternatives.	

Planning Work Sheets: Years 2009 to 2019						
Category: 1.0 – Source Reduction (Continued)						
<u>Completed Actions</u>		<u>Incomplete Actions</u>		<u>New/Revised Actions</u>		
<u>Key Actions</u>		<u>Key Actions</u>	<u>Why Incomplete?</u>	<u>Key Actions</u>	<u>Date Due</u>	<u>Estimated Tons Diverted in 10th Year</u>
Limit residents to one rollout cart; if resident recycles, allow 2 nd & 3 rd carts but change monthly fee to encourage waste reduction and continued recycling				Continue aggressive enforcement of one cart per residence rule to encourage waste reduction and participation in recycling.	On-going program	
Conduct a waste reduction & recycling seminar for local businesses			No demonstrated interest from business sector			
		<p>Achieve Waste Reduction Goal</p> <p>2009 Goal: Reduce the tons collected per 1000 residents by 5% from 388 tons per year to 369, towards a target of 369 tons/yr.</p>	<p>Key Influencing Factors</p> <p>1. – Concord's growth rate continues; at 5%, fueling construction and CII growth;</p> <p>2. – C&D & CII are 67% of the total waste stream; waste reduction efforts must include CII to impact the total waste reduction rate.</p>	<p>Revised Waste Recovery Goal</p> <p>2012 Goal: Increase the targeted waste recovery rate by 1% per year from 10.88% in FY09 to 14.0% in FY12, towards a target of 24.0% in FY19.</p>		Estimated tons diverted in FY19 is 32,600

Planning Work Sheets: Years 2009 to 2019					
Category: 2.0 – Collection					
Completed Actions		Incomplete Actions		New/Revised Actions	
Key Actions		Key Actions	Why Incomplete?	Key Actions	Date Due Estimated Tons Diverted in 10 th Year
Renewed Allied/Republic collection contract through June 2011.				Select consultant to review entire solid waste & recycling program including yard waste collection. Recommend options selected from among industry proven methodologies capable of increasing efficiencies while reducing cost for service delivery. Evaluate adequacy of City ordinance to achieve cost reductions and comply with State regulations	September 2009
A separate contract with Allied/Republic is under negotiation to define the details of the curbside residential recycling provided under landfill franchise agreement; the financial and level of service provisions were previously vague and open to interpretation.					

Planning Work Sheets: Years 2009 to 2019					
Category: 2.0 – Collection (Continued)					
Completed Actions	Incomplete Actions		New/Revised Actions		Estimated Tons Diverted in 10 th Year
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due	
Establish curbside collection of discarded computers and televisions for recycling by January 1, 2010.	1. – Prepare scrap metal recycling trucks to collect e-waste placed curbside for collection; 2. – Coordinate with Cabarrus County to accept, sort, and recycle computers and televisions collected curbside for recycling.	Waiting on NC Legislature to establish funding for electronics recycling program	Establish curbside collection of electronic equipment and deliver to Cabarrus County for recycling.	January 1, 2010 When funding and recycling programs mandated by NC Legislature to be provided by e-waste manufacturers become available, Concord and Cabarrus County will initiate e-waste collection and recycling program	
			IF FUNDING IS AVAILABLE: Conduct a pilot study of automated recycling collection using 96-gallon rollout carts to determine in carts will boost participation rates and volumes recycled.	June 2012	

Planning Work Sheets: Years 2009 to 2019						
Category: 3.0 – Recycle and Re-Use						
Completed Actions		Incomplete Actions		New/Revised Actions		
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due	Estimated Tons Diverted in 10 th Year	
	To increase the number of commercial corrugated customers by 10% from 316 to 348, towards a target of 479 customers..	Number of customers increased to 316 (July 05) but city wide audit of service and business closings contributed to City not reaching goal of corrugated customers.		2012	See Key Actions	
	To increase the number of office paper customers from 195 to 215, towards a target of 297 customers.	Number of office paper customers increased to 195 (July 05) but city wide audit of service and business closings contributed to City not reaching goal of office paper customers.		2012	See Key Actions	
	Increase the percent of est. residential recycling customers by 5%, from 35% to 40%, toward a target of 60%.	Citywide educational efforts continue but residential recycling rates remain at 35%.		2012	See Key Actions	

Planning Work Sheets: Years 2009 to 2019					
Category: 3.0 – Recycle and Re-Use (Continued)					
<u>Completed Actions</u>	Incomplete Actions		New/Revised Actions		Estimated Tons Diverted in 10 th Year
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due	
			Feasibility Study Underway to determine if local Material Recovery Facility (MRF) or Transfer Station viable to increase materials accepted and to reduce transportation costs; joint venture between City & Cabarrus County	November 2009	

Planning Work Sheets: Years 2009 to 2019						
Category: 4.0 – Composting & Mulching						
Completed Actions	Incomplete Actions		New/Revised Actions		Estimated Tons Diverted in 10 th Year	
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due		
	Negotiate long term agreement with Hwy 49 C&D facility	Owners not interested in written contract; a handshake is sufficient for them	Continue to encourage a written contract covering grinding, use of facility, disaster response storage.	June 2010		
Promote public use of mulch and compost.				On-going		
Promote backyard composting				On-going		
Relocated yard waste processing facility to Hwy 49 C&D site.						
	Hire consultant to review entire solid waste & recycling program including yard waste collection. Make recommendations on yard waste collection methodology & revise current City ordinances.	Budget constraints did not allow hiring a consultant until July 2008.	Have hired consultant to review entire solid waste & recycling program including yard waste collection. Will make recommendations on yard waste collection methodology, yard waste processing, disposal, & recommend revisions current City ordinances.	January 2010		

Planning Work Sheets: Years 2009 to 2019						
Category: 5.0 – Incineration With/Without Energy Recovery						
Completed Actions	Incomplete Actions		New/Revised Actions		Estimated Tons Diverted in 10 th Year	
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due		
Not Applicable						

Planning Work Sheets: Years 2009 to 2019						
Category: 6.0 – Transfer of Solid Waste Outside of Geographic Location						
Completed Actions	Incomplete Actions		New/Revised Actions		Estimated Tons Diverted in 10 th Year	
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due		
Not Applicable						

Planning Work Sheets: Years 2009 to 2019						
Category: 7.0 – Disposal of Solid Waste						
Completed Actions	Incomplete Actions		New/Revised Actions		Estimated Tons Diverted in 10 th Year	
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due		
Renewed franchise agreement with BFI to provide disposal through June 2033.						

Planning Work Sheets: 2009 to 2019						
Category: 8.0 – Education With Community and Through Schools						
Completed Actions		Incomplete Actions		New/Revised Actions		
Key Actions		Key Actions	Why Incomplete?	Key Actions	Date Due	Estimated Tons Diverted in 10 th Year
Hired full-time educator to promote waste reduction and recycling				Continue promoting use of clear bags for yard waste	May 2007	
Continue Civic Education program with 3 rd grade classes in Cabarrus County Schools				Continue education on new bulky waste rules	Biannually	
Continue Concord 101 program to reach adults with environmental messages				Enhance web-site with Educator’s Blog, “Did you know...” section, etc.	Annually	
Develop new brochures to promote proper waste disposal and recycling, and revise periodically as rules and guidelines change.				Brochures were revised and distributed via mass mailing to residents incorporating bulky waste rule changes associated with new collection contract.	Routinely as needs arise	
Provide speakers for civic and neighborhood association meetings					Upon request	

Planning Work Sheets: Years 2009 to 2019					
Category: 8.0 – Education With Community and Through Schools (Continued)					
<u>Completed Actions</u>		Incomplete Actions		New/Revised Actions	
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due	Estimated Tons Diverted in 10 th Year
			Develop a <i>Citizens Recycling Academy</i> providing in-depth training to teachers and other professionals on recycling & waste reduction who can become community advocates and part of a speaker's bureau. The <i>Citizens Recycling Academy</i> will be expanded later to the general public. This program will be certified for continuing education credit.	June 2011	
			Promote paper recycling in School System	June 2010, and routinely thereafter as needs arise	
			Plan and conduct annual Earth Day Celebration	Annually	

Planning Work Sheets: Years 2009 to 2019						
Category: 9.0 – Special Waste Elements						
Completed Actions		Incomplete Actions		New/Revised Actions		
Key Actions		Key Actions	Why Incomplete?	Key Actions	Date Due	Estimated Tons Diverted in 10 th Year
Promote HHW in City educational literature and provide link on Concord web site.				Concord continues to promote HHW in City educational literature and to provide link on Concord web site. Information on facility also sent out with loose leaf collection schedules inside residents’ utility bills.	Routinely as part of Education Plan	
				Promote lead acid battery, used motor oil, & used oil filter disposal in City literature and on City web site.	Routinely as part of Education Plan	
				Implement oil filter disposal program at City facilities for City operations with assistance & education through City Environmental Committee	October 15, 2009	
				Continue white goods collection program to assure proper disposal	Provided weekly – customer’s collection day	
				Continue auto tire collection program to assure proper disposal	Provided weekly – customer’s collection day	
				Promote new oil filter disposal rules to the public in City literature, City Circular, Web-site, and using other media.	Routinely as part of Educational Plan	

Planning Work Sheets: Years 2009 to 2019						
Category: 10.0 – Prevention of Illegal disposal and Management of Litter						
Completed Actions	Incomplete Actions		New/Revised Actions			
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due	Estimated Tons Diverted in 10 th Year	
Organize a roadside cleanup crew in Building & Grounds				Routinely as needed		
All Building & Grounds crews instructed to collect litter whenever encountered				Routinely as needed		
Participate in Litter Sweep each spring and fall, and promote volunteer participation				Semi-annually		
Develop an Adopt-a-street program for City - maintained roads				As requested in partnership with Transportation		
Develop a scheduled street sweeping program for all streets with curb and gutter.				Stormwater Dept – Routinely on regular schedule		

Planning Work Sheets: Years 2009 to 2019						
Category: 11.0 – Purchasing of Recycled Products						
Completed Actions	Incomplete Actions		New/Revised Actions		Estimated Tons Diverted in 10 th Year	
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due		
			Continue to evaluate availability and use of recycled C&D as fill material in City projects. Use when possible	July 2009		
Use compost and mulch in City grounds maintenance activities and at municipal golf course				Routinely on City property	14%	
			Evaluate development of purchasing policy encourages purchase of products containing recycled materials when economically competitive and no loss in performance results	June 2010		

Planning Work Sheets: Years 2009 to 2019						
Category: 12.0 – Disaster Response						
Completed Actions	Incomplete Actions		New/Revised Actions		Estimated Tons Diverted in 10 th Year	
Key Actions	Key Actions	Why Incomplete?	Key Actions	Date Due		
			Identify 2 additional satellite yard waste sites to use during significant storm cleanup	June 2010		
Develop emergency operations response plan						
Develop forms and maps to document storm cleanup activities			Revise Debris Removal Plan to comply with new standards	June 2010		

Planning Work Sheets: Years 2009 to 2019					
Category: 13.0 – Management of Discarded Computers Equipment and Televisions (E-waste Collection and Recycling) (New)					
Completed Actions		Incomplete Actions		New/Revised Actions	
Key Actions		Key Actions	Why Incomplete?	Key Actions	Date Due
				Two existing trucks and drivers have capacity to collect a moderate volume of E-waste when the following are available: 1. Computer & Television manufacturers provide funding to assist collection expenses & have recycling program in place; 2. Cabarrus County has recycling facility in place to receive collected E-waste. 3. City of Concord will be unable to begin E-waste collection until both 1 & 2 are in place.	January 1, 2010
				Promote E-waste collection rules and procedures in partnership with Cabarrus County and other municipalities	

Planning Work Sheets: Years 2009 to 2019						
Category: 14.0 – Management and Disposal of Abandoned Manufactured Homes (New Item)						
Completed Actions		Incomplete Actions		New/Revised Actions		Estimated Tons Diverted in 10 th Year
Key Actions		Key Actions	Why Incomplete?	Key Actions	Date Due	
Police Department Code Enforcement Division will continue to manage abandoned manufactured homes through enforcement of the Concord City Code Chapter 14 – BUILDINGS AND BUILDING REGULATIONS and applicable State regulations						